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August 10, 2012

Dr. Randall Johnson, Director
Alabama Surface Mining Commission
P. O. Box 2390
Jasper, AL 35502-2390

Re: Reed Minerals No. 5 Mine
ASMC Permit No. P-3957

Dear Dr. Johnson:

Thank you for the opportunity to provide additional comments with regard to the permit application by Reed Minerals, Inc. (Reed Minerals) to surface mine coal at Reed Minerals No. 5 Mine (Reed No. 5). We are writing on behalf of Black Warrior Riverkeeper, a nonprofit organization whose mission is to protect and restore the Black Warrior River and its tributaries.

As you may recall, we filed permit comments earlier on August 30, 2011 when the Reed No. 5 permit application was first submitted. Unfortunately, most of the concerns identified in our earlier comments are still relevant nearly a year later.

Reed No. 5, if permitted, will discharge to unnamed tributaries of the Mulberry Fork and to the Mulberry Fork of the Black Warrior River classified for Fish & Wildlife (F&W) and Public Water Supply (PWS) in Walker County. As proposed, Reed No. 5 joins a cluster of three other large coal mines on the Mulberry Fork that are reclaimed or currently in reclamation: Horse Creek Mine, Red Star Mine and Quinton Mine. Horse Creek Mine is just across the Mulberry Fork from the Reed No. 5 site. The Shepherd Bend Mine, currently permitted but inactive, is approximately 3 miles from Reed No. 5 at their closest points; the Birmingham Water Works Board's Mulberry Fork drinking water intake is about 5.4 miles downstream of the southernmost portion of Reed No. 5. Shepherd Bend also is permitted to discharge to portions of the Mulberry Fork designated PWS. Despite the number of coal mines on the Mulberry Fork, currently there is no study of the cumulative impacts of these mines on water quality or source drinking water, which is an issue of great concern for us and for many members of the community.

Water Quality Impacts

Like the proposed Shepherd Bend Mine, Reed No. 5 will discharge to the Mulberry Fork immediately upstream of a primary drinking water intake for the Birmingham Water Works Board (BWWB). That drinking water intake serves approximately 200,000 customers of the BWWB throughout the greater Birmingham area. According to the BWWB, Reed No. 5 has a "high potential for adverse impacts to the Birmingham drinking water supply."

We have serious concerns about how the ASMC will oversee the development and implementation of the necessary engineering measures to ensure that Reed No. 5 will not cause or contribute to a violation of water quality standards through its wastewater discharges. The draft NPDES permit that the Alabama Department of Environmental Management (ADEM) issued to Reed No. 5 appears to have been developed from federal effluent guidelines which only address typical coal mining operations, s*ee* 40 CFR part 434, not the present situation where the mining occurs in such close proximity to the public water supply. A review of these guidelines reveals that protection of the public drinking water supply is neither considered nor addressed, perhaps because (as the BWWB has observed in the past) surface mining operations and drinking water withdrawals are such incompatible uses.

As a result, the iron and manganese limits in the draft NPDES permit are not protective of water that is designated PWS. The permit's generally applicable discharge limits include daily average total iron concentrations of 3.0 mg/L (with a daily maximum of 6.0 mg/L); daily average total manganese concentrations of 2.0 mg/L (with a daily maximum of 4.0 mg/L); daily average TSS of 35.0 mg/L (with a daily maximum of 70.0 mg/L); and pH ranging from 6.0 to 9.0. The permit provides that the total manganese limits are *not* applicable if pH is 6.0 or higher and total iron is less than 10 mg/L. Even if Reed No. 5, under the direction and supervision of the ASMC, meets all the requirements of the ADEM NPDES permit we still believe that the operation of the mine will cause or contribute to a violation of water quality standards.

The Safe Drinking Water Act contains secondary maximum contaminant levels (MCLs) for total iron of 0.3 mg/L and total manganese of 0.050 mg/L. The levels allowed by the draft NPDES permit are 10 times the MCL for iron and 40 times the MCL for manganese. By comparison, the BWWB points out that the 2007 daily average raw water concentrations for iron and manganese at their Western Filter Plant, which treats water drawn from the Mulberry Fork Intake, were 0.057 mg/L and 0.079, respectively. Thus, the NPDES and ASMC permits would allow significant degradation of current source water quality. Iron and manganese can cause serious aesthetic problems with drinking water, including taste and staining of clothes or basins. The BWWB states that the permitted increase in iron and manganese levels (as well as sediment) can lead to greater demands on treatment operations as well as increased treatment costs. These costs are paid by consumers, not the mine(s) which create or contribute to the problem.

In addition to iron and manganese, there are many other contaminants of concern associated with coal that can affect source water, drinking water quality and treatment costs. The BWWB points to arsenic, sulfur, salinity, mercury, lead, zinc, copper and cadmium (among others) as elements that are associated with Alabama's coal deposits, specifically those near the Mulberry Fork and the drinking water intake. We know that the Warrior Coal Field has locally elevated concentrations of mercury, as well as elevated levels of arsenic, molybdenum, selenium, copper and thallium. *See* Gold, Dielhaber and Hatch, *Modes of Occurrence of Other Trace Elements in Coals from the Warrior Field, Black Warrior Basin, Northwestern Alabama* (April 27, 2004). The presence of these and other toxic elements associated with coal mining in an area where local residents drink water, swim, and fish make it imperative that any permits issued for Reed No. 5 protect both human health and the environment.

If iron and manganese are present in concentrations that greatly exceed recommended levels for safe drinking water, the BWWB states that it is also reasonable to expect that the other toxic pollutants associated with coal mine drainage will also greatly exceed levels protective of aquatic life and water quality. The BWWB comment letter incorporates extensive data about the possible impacts of mining on aquatic resources and the public water supply. That letter is available on ADEM's "eFile" system (http://edocs.adem.alabama.gov/eFile/) under Permit No. 0079936. We ask the ASMC to seriously consider these points in evaluating whether to issue an ASMC permit for Reed No. 5.

Even the applicant acknowledges in the application (Attachment II-H, pp. 3-4) that both groundwater and surface waters downstream of the mine could experience negative impacts from mining activities stating that "[a]ny (water quality) changes that may occur to the receiving stream are expected to be short term and should return to near pre-mining levels after reclamation." While the Probable Hydrologic Consequences Determination ultimately predicts that the effects on surface water will be minimal and temporary, it should be noted that this is only a prediction, not a guarantee, which fails to account for unforeseen circumstances and is possibly based on misinformation.

In determining the mine's potential contribution of sediment to the receiving stream (Attachment II-H, p.8), the applicant states "The Sediment Basins have an average trap efficiency of 94.3%" and applies a trap efficiency of 93%, perhaps in an effort to be conservative, to the Universal Soil Loss Equation. *However, even 93% trap efficiency is an extremely high estimate that will likely never be achieved by any of the sediment basins in practice.* According to Dr. Robert Pitt's assessment of the performance of temporary sediment ponds at construction sites, using rainfall data for Birmingham, Alabama the annual particulate solids removal rate should be closer to 75.9%.[1] In essence, even according to the applicant's extremely (and unrealistically) optimistic prediction, mining activities will cause temporary changes in surface water quality that will potentially necessitate alterations to the BWWB's treatment processes.

[1] This study is available at http://rpitt.eng.ua.edu/Class/Erosioncontrol/Module6/Module6.htm#_Toc75310372. While we are aware that conditions may be slightly different at construction sites as opposed to coal mines, the estimates provided by Dr. Pitt's research should be a fairly accurate approximation of sediment pond performance at coal mines as well.

In the worst case scenario, a catastrophic release or dam failure in the middle of summer when water demand is high and river flows are low (which the applicant fails to recognize as a potential consequence), mining activities could devastate a major source of water for the city of Birmingham. In the most likely scenario, the mine will contribute much greater concentrations of solids than predicted to the receiving stream, decreasing source water quality and increasing the BWWB's costs of treating water from the Mulberry Fork. In any of these cases, the threat to the water quality of the Mulberry Fork and the city of Birmingham's drinking water supply greatly outweighs any putative economic benefits that the proposed mine may provide.

Perhaps even more critical is the fact that neither the applicant nor the ASMC can actually, accurately predict the effect the mine will have on water quality without evaluating site-specific, detailed engineering plans and drawings for all of the potential sediment basins. Currently, the application only contains "typical" impoundment drawings, which can be taken by anyone from any erosion and sediment control text book. It is impossible to evaluate the effectiveness of sedimentation basins without knowing the exact dimensions of those basins, and how those dimensions will fit within the site specific topography at each proposed location.

Pollution Abatement and Prevention Plan

Just as concerning, the ASMC similarly cannot review and determine the efficacy of the pollution abatement and prevention (PAP) plan for Reed No. 5. The Reed permit application has no specific details for the PAP plan, just generic design requirements. It does not even bear an engineer's signature. For comparison, we attach a copy of the Dolcito Quarry draft NPDES permit, which is an example of what a PAP plan is supposed to be, with specific pond dimensions (length vs. width vs. depth) and orientation and calculations of runoff volume, storage capacity, design flow rates, and outlet structures. (The Dolcito Quarry PAP plan is found at pp. 58 - 84 in the attached draft permit.) This plan is illustrative of the kind of PAP plan that should be required by the ASMC, as opposed to the off-the-rack generics generally offered in permit applications like the one for Reed No. 5. The PAP plan is supposed to be a road map of how pollution will be minimized, managed and contained at the site. How can the ASMC evaluate the efficacy of this plan, which it must do according to the April 13, 2009 Memorandum of Understanding with ADEM, if there are no specifics provided?

The failure to require a detailed and specific PAP plan and who actually bears regulatory responsibility for reviewing and implementing this plan is a source of longstanding frustration with the ADEM and ASMC permitting process for coal mines. The ASMC and ADEM purport to share authority in administering the NPDES permitting system for coal mine operations. ADEM sets the targets in their NPDES permits and it is the ASMC's responsibility to see that these targets are met during the operation of the mine. However, instead of double regulation, there is a dangerous vacuum of regulation where PAP plans are concerned. According to ADEM regulations, surface mine operators "shall provide the Department with a pollution abatement and/or prevention plan" under Ala. Admin. Code § 335-6-9-.03. Moreover, permits "shall be based on a determination by the Department that the

pollution abatement and/or prevention plan and accompanying data submitted by the applicant is adequate to provide for protection of water quality." Under the April 13, 2009 Memorandum of Understanding, this important responsibility of evaluating whether the plan is adequate supposedly shifts to the ASMC.

The PAP plan should contain actual designs for all sediment ponds and other pollution abatement measures that reflect the topography, hydrology, and soil conditions of the mine site. However, there is no actual PAP plan with this information for Reed No. 5 filed with either ADEM or the ASMC. The generic engineering plan and environmental resources information contained in the ASMC file are not an adequate substitute for a detailed PAP plan, especially where, as here, there is justified public concern about the environmental impact of the proposed operation and its possible effects on the public drinking water supply.

Under ADEM's April 13, 2009 Memorandum of Understanding with the ASMC, the duty to ensure that the discharges of wastewater from Reed No. 5 will not cause or contribute to violations of water quality standards falls squarely on the shoulders of the ASMC. However, in its application on file with the ASMC, Reed Minerals has not provided enough information for the ASMC to properly evaluate its pollution abatement structures to ensure that they will comply with water quality standards.

Without a detailed PAP plan in the permit file, neither the ASMC nor the public can evaluate the effectiveness of the PAP plan or ensure that the designs are adequate to protect water quality standards. In the absence of this critical information, the ASMC cannot and should not issue a surface mining permit.

Surface Water Hydrology

The application also states in its Surface Water Hydrology assessment (Attachment II-G, p.3) that "no [precipitation] modeling methods are employed at this time." Aside from detailed design plans, precipitation data is one of the most important aspects of evaluating sediment basin efficiency. Without detailed design plans and precipitation modeling, the applicant's conclusion that the mine will have only minor, temporary effects on surface quality is nothing more than a baseless guess. Without this critical information, the ASMC cannot determine whether or not the mine will adversely affect surface water quality, and therefore cannot determine that the application to engage in surface mining activities is complete.

It is also inappropriate to send the application to public notice without this information as it is vital to the public's ability to properly assess the potential impacts of the mine and whether or not it will affect them personally. ASMC Director Dr. Randall Johnson has indicated via email that the detailed engineering designs (and presumably the precipitation modeling) are generally submitted during the review process because the ASMC and Army Corps of Engineers need to agree on the locations of the sediment basins. This process needs to change so that these decisions are made earlier allowing the

applicant to submit all relevant information with its application. Otherwise, neither the ASMC nor the general public can make an informed decision regarding the potential impacts of the mine.

Rare, Threatened and Endangered Species

The information furnished by the permit applicant about the presence or protection of endangered species or critical habitat is inaccurate, outdated and incomplete. While the Fish and Wildlife Enhancement and Protection Plan maintains that "[t]he Alabama Department of Conservation and Natural Resources (DCNR) listed no endangered species as occurring in proposed permit area," that is not an accurate representation of what the attached DCNR letter says. To the contrary, that letter states "[o]ur database indicates the area of interest has had no biological survey performed at the delineated location, by our staff or any individuals referenced in our database. *Therefore we can make no accurate assessment to the past or current inhabitancy of any federal or state protected species at that location.* A biological survey conducted by trained professionals is the most accurate way to ensure that no sensitive species are jeopardized by the development activities." (Emphasis added.) Pointing out that the area has not been properly surveyed for endangered species and that as a result an accurate assessment is not possible is a far cry from concluding that there are no endangered species.

DCNR identifies the Alabama map turtle (*Graptemys pulchra*), a sensitive species, as occurring approximately 4.2 miles from the Reed No. 5 site. However, according to the permit application file, Reed Minerals performed no survey for the map turtle. This state protected species lives in riverine-riparian systems and associated floodplain lakes, ponds, and sloughs. They often nest on sandy banks or sand bars, but sometimes up to about 100 meters from water. Threats to this state protected species include habitat alteration and the sediment, metals and other pollutants that will be discharged by Reed No. 5, yet there is no evidence that Reed Minerals even considered the possible presence of the map turtle.

Similarly, the U.S. Fish and Wildlife Service (USFWS) lists the red-cockaded woodpecker and bald eagle as endangered or threatened animal species whose critical habitat possibly exists within the proposed permit area or nearby, which could be directly or indirectly impacted by the proposed mining operation. Although the Fish and Wildlife Enhancement and Protection Plan refers to a November 2008 survey for the red-cockaded woodpecker and the bald eagle, there is no such survey in the permit file. The only "wildlife studies" appended to that plan is a cursory and incomplete January 4, 2006 letter from E. S. Lyle about studies for Sloan Mountain Mine No. 2.[2] In this one page letter there is no report, no mention of the author's qualifications or credentials, no methodology as to how he or she reached the conclusions contained in the letter, no described location of the area surveyed and no support for his

[2] Several of the documents in the Reed No. 5 permit file reference Sloan Mountain Mine No. 2, which makes matters confusing. There is a Sloan Mountain Mine No. 2 (P-3913) located in Jefferson County. However, there is also a "Sloan Mountain Mine No. 2" with similar map coordinates and in substantially the same location as Reed No.5 that is identified in some of the earlier permit documents, which we assume is the mine referenced here.

findings. If this is the latest study that Reed Minerals has, it is six years old and stale. If Reed Minerals in fact completed a 2008 study, that study must be included in the permit file if that file is to be deemed administratively complete. Please notify us as to whether there is a 2008 study and, if so, when and where it will be available for review by the public.

What is particularly disturbing is that this mine *was* the subject of a previous application under another name (Sloan Mountain Mine No. 2) and several endangered species of concern were identified by USFWS at that time. *See* USFWS October 26, 2009 TAILS –Log Even Update (attached). That document identifies the following endangered species in the area of the proposed mine: the red-cockaded woodpecker (*Picoides borealis);* the flattened musk turtle *(Sternotherus depressus*); triangular kidneyshell *(Ptychobranchus greenii);* bald eagle (*Haliaeetus leucocephalus); finelined pocketbook (Hamiota altilis*); and ovate clubshell *(Pleurobema perovatum).* Just as important, this document identifies "[a]pproximately 14 acres of flattened musk turtle habitat along the Mulberry Fork." Despite this report and the documented possible presence of these rare species in this area, according to the ASMC file Reed Minerals has not conducted the required species survey.

Given the lack of studies and information about endangered and sensitive species acknowledged by DCNR and USFWS at the location of the proposed mine, it is imperative that Reed No. 5 perform a detailed, meaningful species survey. Unless and until the permit applicant can document and demonstrate that a survey has been completed and that the identified endangered species are not present, the ASMC cannot and should not permit Reed No. 5.

Cultural Resources Assessment

According to the December 1, 2008 letter from Elizabeth Ann Brown, Deputy State Historic Preservation Officer at the Alabama Historical Commission, the cultural resource assessment conducted by P. E. LaMoreaux, identified a significant archaeological site at Reed No. 5. The area surrounding the archaeological site designated IWa249 in the assessment is "potentially eligible for the National Register of Historic Places and should be avoided. If avoidance is not feasible, Phase II testing proposals should be developed." There is no indication in the permit file what, if any, steps Reed Minerals plans to take to protect this cultural resource during mining or whether Phase II testing proposals have been developed. The ASMC should require Reed Minerals to furnish this important information before issuing a permit to ensure that these cultural resources will be protected. Local residents of the Cordova area can attest to the presence of a significant and historic Native American shell mound at the site that must be protected and preserved.

Inconsistent and/or Incomplete Application Information

The permit application states in its Surface Water Hydrology assessment (Attachment II-G, p.2) and the Probable Hydrologic Consequences Determination that the Mulberry Fork has known use

classifications for F& W and PWS. While these are the classifications listed and recognized by ADEM, this area of the river is also commonly used for swimming, recreation, and fishing.

The permit application presents contradictory evidence of the mine's potential to create acidic drainage or runoff. Attachment II-H (p. 2) states "The drilling data at this site indicates that no zones of acid forming materials exist other than the coal seams." On the other hand, the Geology assessment (Attachment II-E, p.6) maintains "there is an interval directly above the New Castle coal seam that is potentially acid-forming and averages approximately five feet thick." While the acid-base account indicates that this acid-forming potential *should be* neutralized, that will only be the case if the acid-forming spoil is properly handled and stored. If the mining company is unaware, or unsure of where this spoil is located, it is likely that it will be mishandled and will create low-pH runoff. Which attachment is correct? Is there, or is there not a potentially acid-forming layer above the New Castel coal seam? And if there is, what assurance does the applicant provide that it will even be recognized, much less properly handled, when encountered if they cannot even make an accurate determination if it is present or not?

Finally, in addition to the missing engineering design plans and precipitation modeling, the permit application is without other essential components as well. For instance, the Reclamation Plan (Part IV, p.3) indicates that "land use letters are forthcoming" and that the Topsoil Variance Application is "forthcoming" (p.7). These letters have been "forthcoming" since we filed our original permit comments nearly one year ago, yet they still are not in the permit application file.

Conclusion

By law, the public participation process must start with "an administratively complete application." *See* Ala. Admin Code r. 880-X-8K-.05 (1)(a). The responsibility for ensuring the existence of this critical starting point for public participation belongs to the ASMC. S*ee* Ala. Admin Code r. 880-X-8K-.03(3). Regardless of whether or not all the identified deficiencies are major or minor components of the overall application, it is incumbent upon the ASMC to present the public with a *complete* permit application for consideration of public comments. Until the permit application has been completed *in its entirety*, the ASMC cannot and should not place the permit on notice for public comments, much less issue a permit to engage in surface mining activities.

This week, near the close of the public comment period, information is still missing from the permit file online at ASMC, and critical links within the permit application were not functional. Without access to <u>all</u> documents and studies required for this application, it is impossible for the public to be meaningfully informed about the mine or provide the kind of substantive comments on this coal mine that applicable regulations require. This lack of information and access shortchanges the ASMC process and renders public participation virtually meaningless. While the ASMC regulations may intend robust and informed public participation, sadly the promise of these regulations is unmet by the process

associated with the Reed No. 5 permit application. The failure to provide an administratively complete permit application and promised access to the permit file online represents a denial of due process for the many who are persons "having an interest which is or may be adversely affected by the decision on the application." *See* Ala. Admin Code r 880-X-8K-.05(2)(b).

In light of these documented deficiencies, which were the subject of extensive public comment at the informal conference last night, we asked the ASMC to extend the public comment period for an additional thirty days after the application is deemed complete. As a result of this request made by Riverkeeper and many others, the ASMC has agreed to extend the public comment period until September 10, 2012. While we appreciate this extension, please understand that it is of little benefit without a complete permit application.

We appreciate the opportunity to offer public comments though this letter and at the informal conference. We look forward to your response.

For the River,

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