

Charles P. Nicholson
Tennessee Valley Authority
400 Summit Hill Drive, WT8C
Knoxville, TN 37902-1499

February 3, 2003

Subject: Draft Environmental Assessment: Braden Mountain Surface Mine

Dear Mr. Nicholson,

We find the Braden Mountain Surface Mine Draft Environmental Assessment (Draft EA) to be inadequate to assess the impacts of the proposed mining lease. We believe that this action will have significant adverse impacts on the environment and an Environmental Impact Statement is required to fully evaluate these impacts.

Furthermore, we disagree with the TVA determination that the potential cumulative environmental impacts of coal leasing are adequately addressed in the Final Environmental Impact Statement, Comprehensive Impacts of Permit Decisions Under the Tennessee Federal Program (OSM 1985). We contend that this document is insufficient to be used to assess the impacts of the lease on Braden Mountain and is outdated and incomplete, for reasons including, but not limited to, a lack of biological surveys.

Among the inadequacies of the Draft EA are the lack of systematic surveys, unjustified conclusions about the impacts of this project to Cerulean Warblers and other forest species, unsubstantiated assumptions that this site will revert to a hardwood forest and an incomplete assessment of the hydrologic impacts of this project. Many of the justifications of no significant impact presented in the Draft EA rely on information presented in the 1999 Gatliff Coal Company EA for Braden Mountain, which itself is inadequate for lack of biological surveys and incomplete hydrologic information.

1) Lack of surveys

While the Draft EA includes some minimal updated surveys, it is apparent that systematic surveys for most plants and animals were not conducted. It is therefore unjustified to reach the conclusions that this project will have minimal impacts because the species to be impacted are largely unknown. Systematic surveys need to be conducted for all of the species listed in Table 1 on page 7 and Appendix 1 on page 25 of the Draft EA as well as on the list compiled by state experts (David A. Buehler, Edward E. C. Clebsch, Gene Wofford, John Copeland, Ron Caldwell, Dr. Michael L. Kennedy, Rick Bivens) of rare species that should be expected on Royal Blue Wildlife Management Area (RBWMA) (Attachment 1). Impacts to these wildlife and plant species cannot be assessed without the results of these surveys.

2) Impacts to Cerulean Warblers and other forest species.

This Draft EA concludes in several instances that the impact to forest species will be temporary and insignificant because of the large amounts of similar habitat adjacent to the project. This inaccurate claim is unsubstantiated and implies that surrounding similar habitat has "vacancies" that displaced species can occupy. To the contrary, displaced individuals are likely to face increased intra-specific competition, increased risk of predation and reduced potential for future reproduction. Evidence that suitable habitat already has a suitable number

of breeders comes from the many avian studies that have documented the existence of non-breeding "floaters" that are ready to occupy a territory as soon as a breeder disappears. Evidence would need to be provided to justify the assumption that adjacent suitable habitat does not already contain an optimum density of the various forest species and is available to individuals that would be displaced by this mining activity.

Another impact to forest species that the Draft EA attempts to minimize over is the impact of the 86 acres of haul roads to be created or enlarged. Most of the existing roads are narrow dirt roads with a closed forest canopy. These types of roads have minimal impact on wildlife. Active haul roads elsewhere on RBWMA are significantly wider, wide enough for oversized dump trucks to pass one another. Trees along these roads are additionally trimmed to improve visibility and road edges are planted in exotic grasses. The haul roads to be constructed for this project would have the effect of fragmenting the forest with accompanying impacts, including increased predation and changes in microclimate, on forest nesting birds and other forest species.

The Draft EA contends that the Braden Mountain project comprises only a small portion of RBWMA (less than 2%). This figure does not include the additional acres that TVA has indicated in the map produced in 2001 of Surface Mineable Reserve Areas on Koppers Properties as potential areas for future surface mining. We contend that this 2%, and especially with consideration of the additional acreage threatened by future mining, represents a large percentage of the prime Cerulean Warbler habitat on RBWMA. The Cerulean Warbler is the subject of great conservation concern because of its declining population trends and was listed as a species in Need of Management by Tennessee Wildlife Resources Agency (TWRA) in 2000. Cerulean Warblers reach their highest breeding densities in Tennessee in the Cumberland Mountains (Nicholson 1997) and the recent Cornell University Cerulean Warbler Atlas confirmed that this area represents the largest concentration of this species in USFWS Region 4 (Rosenberg et. al. 2000). The Atlas further highlights RBWMA as having the largest number of Ceruleans reported of any single site during the atlas project. Since Ceruleans preferentially occupy ridge tops, the most important breeding areas for this species on RBWMA would be disproportionately impacted by cross ridge and mountain top mining.

An arbitrary average density was used in the Draft EA to calculate that 69 pairs of Cerulean Warblers would be impacted by this project. The use of an average when the range of densities, 5 to 51 pairs/100 acres, is so large and not specific to Braden Mountain is inappropriate. In May 2000, a line transect survey was conducted on Braden Mountain and a minimum density estimate of 22.2 pairs/100 acres was calculated (Welton unpubl. data). This is a minimum density because this technique implies that all territorial males along the transect line were detected during the survey. Using this number as the minimum, the density of Cerulean Warblers on Braden Mountain may range from 22.2 to 51 pairs/100 acres. At this density the mining operation would impact from 117 to 269 pairs of Ceruleans in the surface disturbance area. In addition, research presented at the recent Cerulean Warbler Summit in Shepardstown, W.V. December 2002, indicates that the impacts of mining may be much greater than the area of surface disturbance. Research results showed that densities of breeding Ceruleans were negatively impacted in the forest fragments created during mining and in the forest area surrounding mining sites. The Braden Mountain project would create 138 acres of forest fragments and would result in a much greater impact to Cerulean Warblers than either of these estimates would suggest.

More important than the number of pairs to be directly impacted, is the cumulative impact of surface mining on this warbler. The Braden Mountain project cannot be considered in isolation. As reported in the Cerulean Warbler Atlas, the core of this specie's range extends from West Virginia to the Cumberland Mountains of Tennessee. This core overlaps extensively with coal deposits in the eastern United States. Concern was expressed at the Cerulean Warbler Summit that, in the next 10 years, surface mining in this core area could substantially impact the global population of Cerulean Warblers and that coal mining represents the single greatest threat facing this species. Recent changes in market conditions have already resulted in renewed interest in mining in the Cumberland Mountains of Tennessee. The Office of Surface Mining is currently reviewing an application for a 2,000-acre surface mine less than 4.5 miles northeast of Braden Mountain that will also likely impact Cerulean Warblers. The cumulative threat of coal mining on Cerulean Warblers in Tennessee and elsewhere in the core of the Cerulean range needs to be fully assessed before the impact of this lease can be assessed.

3) Reclamation Plan

The Draft EA relies on the revegetation plan that was part of the 1999 Gatliff EA for Braden Mountain and several times dismisses the impacts to wildlife species as temporary with the false assumption that the mine site will revert to a woodland habitat. This 1999 plan is inadequate and will not result in reforestation of the mine site in a reasonable amount of time, if ever. Research conducted in West Virginia indicates that current reclamation methods, including changes to pH, soil compaction, and cover species planted, actually suppress the reestablishment hardwood species (Burger 2002). The Postmining Revegetation Mixture (Attachment 2) in the 1999 Gatliff EA, which would be applied to 480 acres or 91% of the mine site, contains primarily exotic species, relies heavily on some of the plant species specifically referred to as detrimental to reforestation, and recommends the planting of two invasive species. Both annual rye and wheat produce grain that attract rodents that chew the bark of seedlings and kills them; red clover grows too tall and too dense for trees to emerge and yellow sweet clover and bicolor VA-70 (bicolor lespedeza) are classified as Rank 2 Invasive Species by the Southeast Exotic Pest Plant Council.

There is currently no evidence that a functional hardwood forest can be reestablished on mine sites in the Cumberland Mountains. Convincing evidence that a hardwood forest, essentially the same as the one removed during mining, can be reestablished in a reasonable amount of time, needs to be presented before this method can be offered as mitigation for the loss of 526.5 acres of forest habitat.

4) Hydrologic Impacts

There are substantial differences between the map of the major features of the proposed Braden Mountain surface mine included in the Draft EA on page 2 and the map included with the 1999 Gatliff EA. The new map has fewer sediment basins and additional valley fill areas yet no revision to the 1999 Cumulative Hydrologic Impact Assessments (CHIAs) was included with the Draft EA. To the contrary, the Draft EA relies on these CHIAs to justify that this project will have insignificant impacts to ground water and aquatic ecology.

Additionally, the map in the Draft EA indicates that sediment basins will be constructed in streambeds. This is a violation of both state and federal Clean Water Acts. Sediment basins need to be constructed outside of any streams and discharge from these sediment treatment

units need to have permits with numeric water quality limitations set to protect the stream. This is especially important to protect the blackside dace, the arrow darter, and the emerald darter under all flow conditions due of their susceptibility to degradation of water quality resulting from siltation, toxic runoff or acid mine drainage from coalmines.

Information in the Draft EA indicates that portions of this project may be in violation of state and federal Clean Water Acts. Revisions to the CHIAs, additional information on potential impacts to streams and systematic surveys for fish and mussel species, both on and below the project area, are needed before cumulative hydrologic impacts and impacts to aquatic wildlife can be assessed.

Conclusion

Royal Blue Wildlife Management Area has been recognized as a center of biodiversity by The Nature Conservancy (Stein 2000, figure 6.9), by Tennessee Wildlife Resources Agency (TWRA) in the TN GAP Project and the USFWS in the Lower-Tennessee-Cumberland Ecosystem Bird Conservation Plan. Royal Blue has also been included as an Important Bird Area by both the National Audubon Society and the American Bird Conservancy largely because of the high density of breeding Cerulean Warblers. Likewise, the local and regional importance of Royal Blue to this species has led TWRA to make the Cerulean Warbler one of the primary species driving management decisions on RBWMA.

Given the potential adverse environmental impacts to the Cerulean Warbler, the significant acreage of forest habitat and headwater stream habitat to be removed by this project, a full Environmental Impact Statement is needed. An EIS would allow a comprehensive evaluation of cumulative environmental impacts, both direct and indirect, would address the need and purpose of this project, and present alternatives that would be less environmentally damaging than the action presented. Given the numerous inadequacies of this Draft EA, the significant biodiversity of this area, the potential cumulative adverse impacts of this project and the fact that Royal Blue Wildlife Management Area is publicly owned land, we feel that surface mining this site is not in the public interest. We request that a full Environmental Impact Statement be conducted before any mining activity is initiated.

We appreciate the opportunity to comment on the Braden Mountain Environmental Assessment. If there are questions about any of the material included, please call Melinda Welton (615) 799-8095.

Chris Sloan, Acting President
Tennessee Ornithological Society

Stephen Smith, Executive Director
Southern Alliance for Clean Energy

Will Calaway, Executive Director
Tennessee Environmental Council

Gary Bowers, Conservation Chairman
Sierra Club, Tennessee Chapter

Sherlene Spicer, President
Cumberland-Harpeth Audubon Society

cc. Dodd Galbreath
Gary Meyers
Lee Barclay

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