Via email: TwinPines.Comment@dnr.ga.gov

Director Richard E. Dunn
Environmental Protection Division (EPD)
Georgia Department of Natural Resources
2 Martin Luther King Jr. Drive SE
Suite 1456, East Tower
Atlanta, GA 30334

RE: Initial Georgia Conservancy EPD Comments
Twin Pines, Mining Permits, Charlton County, Georgia

Dear Director Dunn,

The Georgia Conservancy looks forward to the upcoming EPD public comment period for the updated heavy minerals mine permit applications from Twin Pines Minerals, LLC ("Twin Pines"). We understand that your division is awaiting an addendum detailing the environmental provisions, including the Mining Land Use Plan (MLUP) and support documentation. We plan to provide a comment letter to the Environmental Protection Division (EPD) when that information becomes available for public comment.

In Georgia, we know of no other projects of this magnitude in recent history that have not triggered an individual federal permitting nexus. However, due to this project's timing and circumstances, the State is to provide the primary permitting. Thus, EPD has been placed in the unenviable position of assessing the potential impact the project will have on the Okefenokee National Wildlife Refuge. This federally-protected wilderness is a globally-significant wetland bordered by Trail Ridge, the Twin Pines site setting. The ridge itself is a complex of hydrogeological settings, essentially a saturated sandhill. Forming a western barrier to the swamps and wetlands of the Okefenokee, Trail Ridge is not only ecologically important in and of itself, but also serves as scaffolding for the health of the Okefenokee.

We applaud the EPD focus on the project's proximity to the National Wildlife Refuge and how it may impact the area's groundwater hydrology. We look forward to the multidisciplinary EPD-led review of the scientific data that will protect the public's interest in the project's adjoining natural features, including the Okefenokee National Wildlife Refuge, associated wetlands, and the Saint Marys River.

To that point, Twin Pines has applied for environmental permits from all five Environmental Protection Division branches. These permits are NPDES Industrial Stormwater, NPDES Industrial Wastewater, Groundwater Withdrawal, Air Quality, and Surface Mining permits.

The Twin Pines property is located between the river headwaters (River Styx drainage) in the Okefenokee and the river's main stem to the west (Boone Creek drainage). There is a direct surface water connection to both water bodies.
The Georgia Conservancy is concerned due to the lack of performance criteria for the mining plan and related activities in the previous Twin Pines USACE (U.S. Army Corps of Engineers) applications and hydrogeology study. For that reason, we urge early consideration of the unanswered questions in the previous Twin Pines applications, including the following:

- How could the groundwater well withdrawals from the Floridan Aquifer impact the Okefenokee water level and the upper groundwater levels?
- How does this "demonstration project" fit in the context of the 12,000 acres that Twin Pines controls, which will see the development of future phases of the overall mining plan?
- How will the project impact the water quality and quantity necessary to sustain fish populations in the St. Marys River? Both the Shortnose sturgeon (Acipenser brevirostrum) and Atlantic sturgeon (Acipenser oxyrinchus oxyrinchus) are present in the St. Marys River. The St. Marys River is designated a Critical Habitat for the Atlantic Sturgeon. The SWAP has also identified the St. Marys as a high-priority watershed.

Performance evaluation criteria for reclamation have not been included in previous submittals, which brings up these related questions and begs further review:

- Will the review include independent and U.S. Fish & Wildlife Service (USFWS) reviews of the Twin Pines MODFLOW 2005 models?
- There has been little detailed operational or performance data on how Twin Pines will achieve the uniform soil conductivity properties modeled in the geohydrology study in post-mining, homogenized soils. Will processed soils be mixed in underwater conditions at the return pit? How will bentonite or other additives be added to achieve permeability?
- How will the wetlands be reestablished, and what will be the impact on site streams? We are interested in the potential impacts of mining operations and soil homogenization on the water level of the Okefenokee and the groundwater profile on Trail Ridge. How will performance be measured? What are the project's adaptive management measures?
- How will groundwater levels change due to this project, and how will this impact fire frequency and intensity on Trail Ridge and the associated wetlands? There have been two major fires in the area of this site. Thus, there is a significant concern related to fire management in and around the Okefenokee.

Please let us know if you have any questions. We are available for further discussion and appreciate the scope of work before your division in reviewing this project proposal.

Thank you very much for your consideration.

Sincerely,

Charles H. McMillan, III                        Katherine Moore
Natural Resources Director                        President
Georgia Conservancy                                Georgia Conservancy