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**Date:** 12/28/2007 3:22:56 PM
**Subject:** Comments on the draft EIS for the Vogtle Early Site Permit
**cc:** <tfarmer@TNC.ORG>

Please see attached letter for comments on the draft EIS for the Vogtle Early Site Permit.

Thank you,
Amanda

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Chief, Rules and Directives Branch
Division of Administrative Services
Office of Administration
Mailstop T-6D59, U.S.
Nuclear Regulatory Commission

12/28/2008

Dear Chief, Rules and Directives Branch and Staff;

The Nature Conservancy (TNC) appreciates the opportunity to comment on the draft Environmental Impact Statement (EIS) for the Plant Vogtle early site permit.

The Nature Conservancy, a scientifically based non-profit organization, has recognized Georgia's rivers as a global conservation priority and has been actively working to preserve Georgia's aquatic habitats since 1969. Our organization has worked with private, public and corporate landowners and conservation partners to ensure the permanent protection of more than 260,000 acres of land, including portions of the lower Savannah River. As we continue to work with communities and partners to achieve our mission, the Savannah River promises to be a conservation priority for TNC over the next several decades.

The Nature Conservancy has been working to define and restore the hydrological needs of the Savannah to support native species and a healthy river, while still meeting the needs of humans who depend on this river for their livelihood. In the Savannah River Basin, TNC is working with the U.S. Army Corps of Engineers (USACE) and other partners to gain a better understanding of the influence of hydrologic processes such as timing, duration, frequency, magnitude and rate of change of river flows, on the river's ecology. TNC, under a cooperative agreement with the USACE has developed a set of ecosystem flow recommendations for the Savannah River Basin and is facilitating implementation of these flows for downstream ecological restoration. By working in partnership with U.S. Fish and Wildlife, U.S. Geological Survey, University of Georgia, Clemson University, Southeastern Natural Sciences Academy, Savannah State University, and South Carolina and Georgia Departments of Natural resources we are achieving this mission of sustainable water management.

The ecological health of the Savannah River is facing a variety of threats. These threats include but are not limited to; altered hydrology due to dams and reservoir management, loss of essential habitat due to the lack of adequate river flows during drought conditions or periods of natural low flows, and dredging of the navigation channel.

We would like for the NRC to consider the following issues during the review of this EIS:

***Water resources within the Savannah River basin***. Since the last drought that occurred in the basin (1998-2002), the Savannah District of the USACE have been working on a study to examine the current and projected water resource uses and needs of the Savannah River. Early studies indicate that existing and future demands and needs (50 years out) cannot be met with current water management practices, storage allocations, and flow requirements from the USACE projects on the Savannah. These demands include municipal and industrial water uses, recreation, and enough water to support ecologically healthy habitats downstream. Recent drought management activities and public meetings have highlighted the need for completion of a comprehensive wide basin study in order to bring on-line needed modeling tools and analyses to aid in operation and management of the Savannah River Basin.

***Minimum Savannah River flows likely to occur***. The Nature Conservancy along with partners at other state and federal agencies has been a Project Delivery Team member during the development of the most recent Drought Management Plan for the Savannah River reservoir projects. The Nature Conservancy continues to participate with the USACE team on bi-monthly calls regarding the management of the reservoirs and river flows. The current drought of record for Georgia has brought to the attention the very real possibility of entering into Drought Level 4. In Drought Level 4, flows leaving Thurmond Dam are reduced to the amount of inflow into the reservoir projects. Current estimates indicate that these flows downstream could be reduced as low as 600 cfs daily average releases from Thurmond dam. The USACE is currently in discussions with state and other federal agencies about the ecological and management problems of entering into Drought Level 4.

The current Draft EIS used 3800 cfs to define the withdrawal for normal operation of the existing units and the two new units and determine that operation at this level would require approximately 4.8% of the river flow. Consumptive use at this low flow was determined to be 3.4 %. Even though all of these values remain below the 5 % criteria use by EPA to require evaluation of entrainment effects at the annual average river flow value (ref. Vogtle draft EIS, pages 7.3 -7.5), the 5% withdrawal specified by EPA is only related to calculating impacts of waste assimilation and thermal effects. It does not address maintaining adequate water to support aquatic habitats. A consumptive loss of 3.4% of the total river flow during drought conditions may be detrimental to species that are already stressed during low flow conditions and for native and endangered species that are already in historically low population numbers. Our concern is that all users now and in the future have adequate water supply. If a single user in the basin uses 3.7% without the benefit of a watershed water management plan, opportunities for future users are not taken into consideration and healthy aquatic habitats and species may be at risk.

We suggest that the EIS examine impacts on the Savannah River at Drought Level 4 with all four reactors operating (existing 1 & 2 and proposed 3 &4), the most severe drought condition outlined by the USACE. As a result, the EIS will be better able to estimate the percentage of the total river flow that will be withdrawn and discharged from the proposed new Units 3 and 4 along with an assessment of having four reactors operating. The final EIS should address impacts of the proposed increase in withdrawal and discharge at all Savannah River flows that are likely to occur, including Drought

Level 4. Increasing consumptive use of water in the Savannah River Basin during low flow periods could contribute to cumulative environmental risks downstream including saltwater intrusion to the Savannah Wildlife Refuge and impacts on the productivity of the Savannah River estuary.

***Dredging of the Savannah River Navigation channel***. We would also like to encourage that this draft EIS to address the significant dredging needs of the entire river that may be needed for the construction phase of the additional two reactors. Since the 1980's commercial navigation of the channel above the Savannah Harbor has virtually ceased. The navigation channel of the Savannah River has not been maintained by the USACE for over 27 years. Since the last time that the river was dredged to support navigation, information about endangered and globally rare species that depend on habitats within and surrounding the river channel has significantly increased. For example: approximately 39 species of freshwater mussels have been recorded in the Savannah River. Eleven of which have been Globally ranked as imperiled or critically imperiled, 13 of which as listed by the State of Georgia Non-Game Heritage Conservation Program as imperiled or critically imperiled in the State of Georgia.

Although we understand it to be the responsibility of the USACE to examine the environmental impacts of maintaining the channel for navigation, the negative environmental impacts may be severe to endangered and rare species. We suggest that the environmental impacts of this action should also be addressed by this EIS for a comprehensive look at the full impacts of this expansion project. We would like to see this EIS consider alternatives to dredging the channel for barge transport of construction materials.

**Water Quality.** Temperature changes negatively affect fish, mussel, plant, and animal life which are indicators of riverine ecological function downstream. We would like to see not only ecological modeling of the effects of thermal discharge from the additional 2 units and modeling of all 4 units in operation, but ecological modeling with the additional cumulative effects of decreasing flows due to drought and increasing water demands in the basin on species of special concern. Although not lethal, the thermal signature from the plant may change the thermal regime of the river in combination with decreasing flows due to either increased water us upstream, or decreasing flows due to droughts.

TNC encourages the Nuclear Regulatory Commission to look at these issues and to use the critical information that will be available after the completion of the USACE Comprehensive basin study (currently between Phase I and Phase II) and the state of Georgia's Comprehensive Statewide Water Management Plan. The Statewide Management Plan is currently within its final review process and upon acceptance, will include comprehensive basin wide analysis of water allocation including the Savannah River basin. This will occur in early 2008. Environmental impacts of the total water consumption from all four reactors by Plant Vogtle expansion should be considered in context with other consumptive uses within the basin, existing uses and those proposed in the future. The amount of water consumed by the expansion of Vogtle needs to be assessed along with future water uses and increasing water demands basin wide. We also recommend that any EIS for the expansion of Plant Vogtle should include the environmental impacts associated with all dredging for the construction phase of the project including the navigation channel.

We appreciate the opportunity to provide scoping comments that may ensure that the health and diversity of the Savannah River are maintained while continuing to allow for compatible human usage of its resources. Thank you for considering these concerns.

Please feel free to contact us with any questions, or contact us for additional information needs.

Sincerely,

Michelle B. Lakly, Ph.D.

Vice President / State Director

Georgia Chapter

The Nature Conservancy