



# United States Department of the Interior

FISH AND WILDLIFE SERVICE  
1208-B Main Street  
Daphne, Alabama 36526

IN REPLY REFER TO:

2006-FA-0310b

December 13, 2006

L. Raghavan, Chief  
Plant Licensing Branch II-2  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation  
United States Nuclear Regulatory Commission  
Washington, D.C. 20555-0001

Re: Notice of Availability of the Draft Environmental Assessment of Extended Power Uprate Regarding Browns Ferry Nuclear Plant Units 1, 2, and 3 (TAC NOS. MC3812, MC3743, and MC3744)

Dear Mr. Raghavan:

The U.S. Fish and Wildlife Service (Service) received the Nuclear Regulatory Commission's (NRC) draft environmental assessment (EA), draft Finding of No Significant Impact (FONSI), and cover letter, dated November 27, 2006, concerning the Tennessee Valley Authority's (TVA) application for extended power uprate (EPU) for Browns Ferry Nuclear Plant (BFN) Units 1, 2, and 3. In your cover letter, you stated that NRC staff had found that the proposed action would not result in any significant impacts to any Federally listed species or critical habitat. We have reviewed the draft EA, your project effects analysis on threatened and endangered (T&E) species located in the vicinity of BFN, and our previous correspondences with NRC and TVA regarding the proposed action and have the following comments.

We are providing the following comments in accordance with the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.), the Migratory Bird Treaty Act (40 Stat. 755, as amended; 16 U.S.C. 703 et seq.), and the Endangered Species Act of 1973 (ESA) (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.).

Our evaluation of this project has included a review for T&E species and/or their designated critical habitat in the proposed project area. According to our collection records, there are no known sites of T&E species or critical habitat in the proposed project site or in the vicinity (within a mile radius) of the project footprint. Past land management practices and the construction of Wheeler Dam on the Tennessee River have likely limited the potential for federally listed aquatic species to occupy this site or re-establish populations in this area. We note, however, that collection records available to

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the Service may not be all-inclusive, as our database is a compilation of collection records made available by various individuals and resource agencies. This information is seldom based on comprehensive surveys of all potential habitats and thus does not necessarily provide conclusive evidence that protected species are present or absent at a specific locality.

Based on the best information available at this time, our understanding of the proposed project, and past surveys conducted in areas in close proximity to the proposed project, we believe that the requirements under Section 7 of the Endangered Species Act (ESA) of 1973, as amended, are fulfilled. Therefore, we concur that the proposed EPU and start-up of Unit 1 at BFN would not likely result in adverse affects to any T&E species. Obligations under Section 7 of the ESA must be reconsidered if: (1) new information reveals impacts of this identified action that may affect listed species or critical habitat in a manner not considered, (2) the action is subsequently modified to include activities which were not considered in this consultation, or (3) new species are listed or critical habitat designated that might be affected by the proposed action.

We would like to reiterate comments provided in our letter to TVA, dated August 9, 2006, regarding TVA's proposal to construct a 16-cell mechanical draft cooling tower instead of the originally proposed 20-cell tower at BFN. The analyses conducted by TVA suggests that there is little difference/gain in environmental protection of constructing the 20-cell tower. Based on the modeled results, the number of hours a 16-cell tower would be derated compared to the 20-cell tower were not too great or cost prohibitive to restrict TVA's operating BFN at its target of 120% capacity of its original licensed level. Based on their environmental and economic analysis of these different sized towers, TVA has proposed to construct a 16-cell cooling tower and have it constructed and ready for use prior to the start-up and use of Unit 1 at BFN, with a target date of summer of 2007. We understand the consequences of building the smaller 16-cell tower will require the TVA to derate BFN more often during the hot, dry portion of the summer throughout the new license period for Units 1, 2, and 3 than would likely be needed if a 20-cell tower were to be constructed. Based on the information and data presented and the fact that BFN would meet its National Pollutant Discharge Elimination System (NPDES) permit requirements, we would agree that there is no environmental advantage of building the 20-cell over the construction of the 16-cell cooling tower at BFN.

We believe the NRC and TVA, through past correspondence during meetings, phone calls, letters, and electronic mail messages have addressed the majority of our concerns. The NRC and TVA's responses to our concerns have been documented and are on file in our office. However, a few concerns remain. We are concerned about any trend toward prolonged higher temperatures and poor water quality conditions in Wheeler Reservoir as a result of the EPU. We have indicated in past discussions with TVA, that due to the EPU, some sensitive species, possibly host fish for mussel species, might be affected, if not by mortality, by sublethal effects such as delayed reproduction, habitat avoidance, and other chronic effects. Also, since much of the projected environmental effects of uprating BFN were derived from extensive modeling efforts carried out by TVA,

continued in situ monitoring efforts and data collection are needed via the Vital Signs Program and water quality monitoring to confirm the model assumptions and predictions. The Service requests that TVA provide, for our review, water quality, species survey data (e.g. Reservoir Fish Assemblage Index, Benthic Macroinvertebrate Index, Sport Fishing Index), and other pertinent reservoir data as that information becomes available through routine monitoring. Should any mortality events or declines in biotic diversity be demonstrated, we also request that TVA undertake additional more detailed studies to identify causal factors and remedies.

We believe TVA and NRC have provided our agency with adequate environmental effects information for the proposed restart of Unit 1 and uprating of all three units. Although much of the impacts analysis provided to us was based on modeling scenarios, we believe TVA and NRC have conducted their analyses to capture worst case conditions and have presented the Service adequate responses to our documented concerns. Therefore, provided water quality and aquatic biota monitoring programs continue to be employed and data resulting from these programs fall within projected or modeled expectations with no associated declines in reservoir fish or shellfish populations in the area of BFN influence, and provided the 16-cell cooling tower is constructed prior to the start-up and use of Unit 1, we have no objections to the license renewal and EPU at BFN Units 1, 2, and 3.

We appreciate the opportunity to review NRC's draft EA and look forward to working with you in the future. If you have questions or need additional information, please contact Mr. Rob Hurt at (256)353-7243 ext. 29. In future correspondence, please refer to the reference number above.

Sincerely,



Elaine Snyder-Conn  
Acting Field Supervisor

cc: Harriet Nash, NRC-Division of License Renewal, Mail Stop 0-11F1,  
Office of Nuclear Reactor Regulation, Washington D.C. 20555  
Peggy Shute, TVA, Knoxville, TN  
Rob Hurt, USFWS, Decatur, AL