

July 11, 2006

Mr. Karl W. Singer  
Chief Nuclear Officer and  
Executive Vice President  
Tennessee Valley Authority  
6A Lookout Place  
1101 Market Street  
Chattanooga, TN 37402-2801

SUBJECT: BROWNS FERRY NUCLEAR PLANT, UNITS 1, 2, AND 3 — UNACCEPTABLE ANALYSIS FOR STEAM DRYERS ON EXTENDED POWER UPRATE AMENDMENT REQUESTS (TAC NOS. MC3812, MC3743, AND MC3744) (TS-431 AND TS-418)

Dear Mr. Singer:

This letter discusses serious concerns with Tennessee Valley Authority's (TVA's, the licensee's) response to the U.S. Nuclear Regulatory Commission (NRC) staff requests for additional information regarding the ongoing extended power uprate (EPU) amendment request review. By letters dated June 28 and 25, 2004, TVA submitted amendment requests for Browns Ferry Nuclear Plant (BFN), Units 1, 2, and 3. The proposed amendments would change the BFN operating licenses to increase the maximum authorized power level by approximately 20 percent above the current maximum authorized power level for Unit 1, and approximately 15 percent for Units 2 and 3.

In support of the EPU review, TVA provided the General Electric scale model test report, the Continuum Dynamics Incorporated - CDI - load definition benchmarking report, and the unmodified steam dryer stress report. These reports were provided in letters dated March 9, April 13, and May 5, 2006, which were intended to demonstrate that the structural integrity of the steam dryers would not be challenged under extended power uprate (EPU) conditions.

In a letter dated June 23, 2006, TVA provided an addendum to the BFN steam dryer stress analyses report, representing planned steam dryer modifications. The NRC staff reviewed the information provided. From these analysis results, the NRC staff concludes that the submittals do not provide an adequate technical basis to enable the NRC staff to find the applications acceptable. For example, the NRC staff noted that the June 23, 2006, addendum indicated that the maximum stress on some components is calculated to be above the fatigue endurance limit during EPU conditions. Additionally, it was observed that the scale model test report provided in the April 13, 2006, letter, indicates high frequency resonance peaks in the Unit 1 scale model under simulated EPU conditions.

As discussed in a teleconference on July 10, 2006, the remaining outstanding information related to the steam dryers is needed by July 21, 2006. Should any information needed for this review be received after July 21, the NRC staff notes that the scheduled EPU presentations to the Advisory Committee on Reactor Safeguards could be delayed from the current schedule of November-December 2006. The NRC staff requests that you inform us at the earliest opportunity of your plans to address these concerns.

K. W. Singer

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If you have any questions, please contact Ms. Margaret Chernoff at 301-415-4041 or Ms. Eva Brown at 301-415-2315.

Sincerely,

*/RA/*

Cornelius F. Holden, Deputy Director  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Docket Nos. 50-259, 50-260, and 50-296

cc: See next page

K. W. Singer

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*/RA/*

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