

December 14, 2004

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: REQUEST FOR ADDITIONAL INFORMATION FOR THE REVIEW OF THE  
BROWNS FERRY NUCLEAR PLANT, UNITS 1, 2, AND 3, LICENSE RENEWAL  
APPLICATION (TAC NOS. MC1704, MC1705, AND MC1706)

Dear Mr. Singer:

By letter dated December 31, 2003, Tennessee Valley Authority (TVA) submitted an application pursuant to 10 CFR Part 54, to renew the operating licenses for the Browns Ferry Nuclear Plant, Units 1, 2, and 3, for review by the U.S. Nuclear Regulatory Commission (NRC). The NRC staff is reviewing the information contained in the license renewal application (LRA) and has identified areas where additional information is needed to complete the review. Specifically, the enclosed request for additional information (RAI) is related to the time-limited aging analysis (TLAA) for the reactor building crane load cycles, Section 4.7.1.

Based on discussions with Ken Brune of your staff, a mutually agreeable date for your response to the RAIs is within 30 days from the date of this letter. If you have any questions regarding this letter or if circumstances result in your need to revise the response date, please contact me at 301- 415-1594 or by e-mail at [yks@nrc.gov](mailto:yks@nrc.gov).

Sincerely,  
/RA/

Yaira K. Diaz Sanabria, Project Manager  
License Renewal Section A  
License Renewal and Environmental Impacts Program  
Division of Regulatory Improvement Programs  
Office of Nuclear Reactor Regulation

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

Enclosure: As stated

cc w/encl: See next page

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DATE	12/14/04	12/14/04	12/13/04	8/31/04	12/14/04

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DISTRIBUTION: Ltr to K. Singer, TVA, RAI Re: Browns Ferry Nuclear Plant, Units 1, 2 and 3,  
Dated: December 14, 2004, Accession No: **ML043500508**

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**BROWNS FERRY NUCLEAR PLANT UNITS 1, 2, AND 3  
LICENSE RENEWAL APPLICATION  
REQUEST FOR ADDITIONAL INFORMATION  
SECTION 4.7.1**

**RAI 4.7.1-1**

**Reactor Building Crane Load Cycles**

Section 4.7.1 of the LRA, describes the analysis of the reactor building crane. This section states that the total number of expected cycles for this crane over the entire life including construction, is 60 years of operation for all three units. This includes decommissioning which is conservatively estimated at less than 21,000 loading cycles. LRA aging management program (AMP), B.2.1.20, includes an evaluation of the reactor building crane fatigue. It states that the disposition of the time-limited aging analysis (TLAA) is that the analyses are valid through the period of extended operation because the 60 year, 7,500 cycle estimate remains a small fraction of the 100,000 cycle design. TVA letter to the NRC dated September 28, 1982, in response to NUREG-0612, states that the structural and rotating parts of the crane were designed for infinite life. Clarify if infinite life is still valid or explain the derivation for the total number of loading cycles estimated for the reactor building crane. Also, explain the difference between the 21,000 cycles estimated in LRA Section 4.7.1 and the 7,500 cycles estimated in LRA Section B.2.1.20. If the crane design does not provide for infinite life, clarify if additional loading cycles caused by vibration during crane operation are considered in the analysis or the basis for not including loading cycles induced by vibration.

Enclosure

Tennessee Valley Authority

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