

October 8, 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 requests for additional information (RAIs) are related to the aging management of Sections 2.3.2 and 2.3.3 of the LRA. Drafted forms of these RAIs were discussed with TVA staff on a telephone conference call on September 22, 2004.

Based on discussions with Ken Brune of your staff, a mutually agreeable date for your response to the RAIs is within 30 days of 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.

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	10/8/04	10/7/04	8/20/04	10/8/04

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**BROWNS FERRY NUCLEAR (BFN) PLANT, UNITS 1, 2 AND 3
LICENSE RENEWAL APPLICATION
REQUEST FOR ADDITIONAL INFORMATION (RAI)
SCOPING AND SCREENING RESULTS OF MECHANICAL SYSTEMS
SECTIONS 2.3.2 AND 2.3.3**

Containment System: Reactor Building Ventilation Subsystem

RAI 2.3.2.1-1

For Browns Ferry Units 1, 2 and 3 Containment System (Reactor Building Ventilation System), described in license renewal application (LRA) Section 2.3.2.1 and on LRA Drawings 1-47E865-1-LR, 1-47E865-3-LR, 2-47E2865-12-LR, 2-47E610-64-1-LR, 3-47E865-12-LR, and 3-47E610-64-1-LR, LRA Table 2.3.2.1, "Containment System" and LRA Table 3.2.2.1, "Containment System-Summary of Aging Management Evaluation" do not contain all the components of the reactor building ventilation system as highlighted on the drawing. For example, while the tables list bolting, ductwork, fittings, etc., they do not list housings for air cooling units, dampers and damper housings, cooling coil housings, nor valve bodies, just to name a few. Clarify whether these components and all other applicable components of the system, are within the scope of license renewal in accordance with 10 CFR 54.4(a), and subject to aging management review in accordance with 10 CFR 54.21(a)(1). If these components are in the scope of license renewal, update the LRA by providing the applicable information in the appropriate LRA tables. If these components are excluded from the scope of license renewal and not subject to an AMR, provide justification for the exclusion.

For BFN Units 1, 2, and 3 LRA, none of the air intake or exhaust structures except for LRA Section 2.3.3.8, "Ventilation System," include intake and exhaust screens within the scope of license renewal. Clarify whether screens for air intake and exhaust structures, for those systems described in LRA Section 2.3.2.1 are in the scope of license renewal in accordance with 10 CFR 54.4(a), and subject to aging management review in accordance with 10 CFR 54.21(a)(1). If screens for intake and exhaust structures are in the scope of license renewal, update the LRA by providing the applicable information in the appropriate tables. If screens for intake and exhaust structures are excluded from the scope of license renewal and not subject to an AMR, provide justification for the exclusion.

Standby Gas Treatment System

RAI 2.3.2.2-1

For Browns Ferry Units 1, 2 and 3 Standby Gas Treatment System, described in LRA Section 2.3.2.2 and on LRA Drawing 0-47E865-11-LR, LRA Table 3.2.2.2, "Standby Gas Treatment System" and LRA Table 2.3.2.2, "Standby Gas Treatment System-Summary of Aging Management Evaluation" do not contain all the components of the system as highlighted on the drawing. For example, while the tables list bolting, ductwork, fittings, etc., they do not list fan housings, filter housing, damper housing nor valve bodies, just to name a few. Clarify whether these components and all other applicable components of the system, including duct sealants, wall sealants, pressure boundary sealants, etc., are within the scope of license renewal in accordance with 10 CFR 54.4(a), and subject to aging management review in

Enclosure

accordance with 10 CFR 54.21(a)(1). If these components are in the scope of license renewal, update the LRA by providing the applicable information in the appropriate LRA tables. If these components are excluded from the scope of license renewal and not subject to an AMR, provide justification for the exclusion.

Also, provide clarification for the following LRA Drawing 0-47E865-11-LR that shows an interface (incoming arrow) at location H-3 indicating that incoming flow is from 1-47E865-1 at location F8, while interface drawing 1-47E865-1 shows Detail 1F1 at location F-8 with incoming flow from 0-47E865-1, H-2.

For BFN Units 1, 2, and 3 LRA, none of the air intake or exhaust structures except for LRA Section 2.3.3.8, "Ventilation System," include intake and exhaust screens within the scope of license renewal. Clarify whether screens for air intake and exhaust structures, for those systems described in LRA Section 2.3.2.2 are in the scope of license renewal in accordance with 10 CFR 54.4(a), and subject to aging management review in accordance with 10 CFR 54.21(a)(1). If screens for intake and exhaust structures are in the scope of license renewal, update the LRA by providing the applicable information in the appropriate tables. If screens for intake and exhaust structures are excluded from the scope of license renewal and not subject to an AMR, provide justification for the exclusion.

Containment Inerting System

RAI 2.3.2.6-1

The containment inerting system is described in LRA Section 2.3.2.6 and depicted on LRA Drawings 1-47E860-1-LR, 2-47E860-1-LR, and 3-47E860-1-LR, respectively, for BFN Units 1, 2 and 3. However, the system components including piping, valves and equipments between (1) FCV76-17 and PCV 67-14 including downstream bypass line after BYV-76-542, and (2) between CKV-76-653 and CKV-76-659 are not shown within the scope of license renewal in accordance with 10 CFR 54.4(a), and subject to aging management review in accordance with 10 CFR 54.21(a)(1). If these components are in the scope of license renewal, update the LRA by providing the applicable information in the appropriate LRA Tables 2.3.2.6 and 3.2.2.6. If these components are excluded from the scope of license renewal and not subject to an AMR, provide justification for the exclusion.

Ventilation System: Radioactive Waste Building and Diesel Generator Ventilation Systems

RAI 2.3.3.8-1

For Browns Ferry Units 1, 2 and 3 Ventilation System, described in LRA Section 2.3.3.8 and on LRA Drawings 3-47E865-8-LR, 0-47E865-6-LR and 0-47E865-8-LR, LRA Table 2.3.3.8, "Ventilation System" and LRA Table 3.3.2.8, "Ventilation System-Summary of Aging Management Evaluation" do not contain all the components of the system, as highlighted on the drawings. For example, while the tables list bolting, ductwork, fittings, etc., they do not list damper housings including fire damper housings, fan housings, air intake or exhaust structures including screens, nor supply and exhaust grills just to name a few. Clarify whether these components and all other applicable components of the system are within the scope of license renewal in accordance with 10 CFR 54.4(a), and subject to aging management review in

accordance with 10 CFR 54.21(a)(1). If these components are in the scope of license renewal, update the LRA by providing the applicable information in the appropriate LRA tables. If these components are excluded from the scope of license renewal and not subject to an AMR, provide justification for the exclusion.

Heating, Ventilation, and Air Conditioning System (HVAC)

RAI 2.3.3.9-1

For Browns Ferry Units 1, 2 and 3 HVAC System, described in LRA Section 2.3.3.9 and on LRA Drawings 0-47E865-2-LR, 0-47E865-4-LR, 0-47E865-15-LR, 0-47E866-3-LR, 1-47E1865-4-LR, 2-47E2865-4-LR, 3-47E865-4-LR, and 3-47E3865-4-LR, 3-47E865-8-LR, LRA Table 2.3.3.9, "Heating, Ventilation, and Air Conditioning System" and LRA Table 2.3.3.9, "Heating, Ventilation, and Air Conditioning System-Summary of Aging Management Evaluation" do not contain all the components of the system as highlighted on the drawings. For example, while the tables list bolting, ductwork, fire dampers, fittings, flexible connectors, etc., they do not list fan housings, filter housings, cooling coil housings, damper housings including fire damper housings, metal lath screens, nor valve bodies, supply and return grills just to name a few. Clarify whether these components and all other applicable components of the system, including duct sealants, wall sealants, pressure boundary sealants, etc., are within the scope of license renewal in accordance with 10 CFR 54.4(a), and subject to aging management review in accordance with 10 CFR 54.21(a)(1). If these components are in the scope of license renewal, update the LRA by providing the applicable information in the appropriate LRA tables. If these components are excluded from the scope of license renewal and not subject to an AMR, provide justification for the exclusion.

For BFN Units 1, 2, and 3 LRA, none of the air intake or exhaust structures except for LRA Section 2.3.3.8, "Ventilation System," include intake and exhaust screens within the scope of license renewal. Clarify whether screens for air intake and exhaust structures, for those systems described in LRA Section 2.3.3.9, are in the scope of license renewal in accordance with 10 CFR 54.4(a), and subject to aging management review in accordance with 10 CFR 54.21(a)(1). If screens for intake and exhaust structures are in the scope of license renewal, update the LRA by providing the applicable information in the appropriate tables. If screens for intake and exhaust structures are excluded from the scope of license renewal and not subject to an AMR, provide justification for the exclusion.

Turbine building HVAC System

RAI 2.3.3.9-2

Final Safety Analysis Report (FSAR) Section 10.12.5.2, "Turbine building," is included as part of the HVAC systems but not included in the LRA. Provide justification for the exclusion of turbine building ventilation system from the scope of the license renewal in accordance with 10 CFR 54.4, and subject to an AMR in accordance with 10 CFR 54.21.

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