

January 25, 2005

10 CFR 54

U.S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Mail Stop: OWFN P1-35  
Washington, D.C. 20555-0001

Gentlemen:

In the Matter of	)	Docket Nos. 50-259
Tennessee Valley Authority	)	50-260
		50-296

**BROWNS FERRY NUCLEAR PLANT (BFN) - UNITS 1, 2, AND 3 LICENSE RENEWAL APPLICATION (LRA) - LRA SECTION 4.4 RESPONSE TO NRC VERBAL REQUEST FOR FOLLOW UP QUESTION FOR RAI 4.4.5-1 (TAC NOS. MC1704, MC1705, AND MC1706)**

By letter dated December 31, 2003, TVA submitted, for NRC review, an application pursuant to 10 CFR 54, to renew the operating licenses for the Browns Ferry Nuclear Plant, Units 1, 2, and 3. As part of its review of TVA's license response letter dated September 30, 2004, the NRC staff, through a verbal request, identified an additional follow up question for RAI 4.4.5-1.

The enclosure to this letter contains the specific NRC requests for additional information and the corresponding TVA responses.

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If you have any questions regarding this information, please contact Ken Brune, Browns Ferry License Renewal Project Manager, at (423) 751-8421.

I declare under penalty of perjury that the foregoing is true and correct. Executed on this 25<sup>th</sup> day of January, 2005.

Sincerely,

*Original signed by*

T. E. Abney  
Manager of Licensing  
and Industry Affairs

Enclosure:

cc: See page 3

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Enclosure

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(Via NRC Electronic Distribution)

Enclosure

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cc: continued page 4

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ENCLOSURE

TENNESSEE VALLEY AUTHORITY  
BROWNS FERRY NUCLEAR PLANT (BFN)  
UNITS 1, 2, AND 3  
LICENSE RENEWAL APPLICATION (LRA),

RESPONSE TO NRC REQUEST FOR ADDITIONAL INFORMATION (RAI),  
RELATED TO VERBAL REQUEST FOR FIRE PROTECTION FOLLOW UP  
QUESTION FOR RAI 4.4.5-1

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(SEE ATTACHED)

**TENNESSEE VALLEY AUTHORITY  
BROWNS FERRY NUCLEAR PLANT (BFN)  
UNITS 1, 2, AND 3  
LICENSE RENEWAL APPLICATION (LRA) ,**

**RESPONSE TO NRC REQUEST FOR ADDITIONAL INFORMATION (RAI) ,  
RELATED TO VERBAL REQUEST FOR FIRE PROTECTION FOLLOW UP  
QUESTION FOR RAI 4.4.5-1**

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By letter dated December 31, 2003, TVA submitted, for NRC review, an application pursuant to 10 CFR 54, to renew the operating licenses for the Browns Ferry Nuclear Plant, Units 1, 2, and 3. As part of its review of TVA's license response letter dated September 30, 2004, the NRC staff, through a verbal request, identified an additional follow up question for RAI 4.4.5-1.

The September 30, 2004 response addressed the use of flamemastic at fire stops. The follow-up verbal question requested TVA to provide additional information concerning the use of flamemastic on non-IEEE 383 flame tested cable installed in open trays.

**Additional Information to TVA Response to NRC RAI 4.4.5-1:**

In addition to Flamemastic coatings used on fire barrier penetration seals, Flamemastic as a flame retardant coating on non-IEEE 383 flame tested cable installed in open trays is also in the scope of license renewal.

In TVA's previous response to RAI 4.4.5-1, aging effects requiring management were incorrectly assigned to Flamemastic when used in a qualified fire barrier configuration. NUREG-1801, Section VII-G (GALL Report), states that aging management of fire barrier penetration seals is only required for seals exposed to weather (i.e. an outdoor environment).

At BFN, fire barrier penetration seal materials and Flamemastic coatings on exposed cables in open cable trays are exposed to an inside air environment, and therefore have no aging effects and require no aging management program.

Based on the above discussion, aging effects were also incorrectly assigned to fire barrier materials Thermolag, Elastomers, and Gypsum. Section 3.5 of the LRA will be revised to update the aging effects requiring management for these fire barrier materials.

The following changes should be made to the previously submitted "TVA Response to RAI 4.4.5-1" and Section 3.5 of the LRA.

**The following information previously added by "TVA Response to RAI 4.4.5-1" should be revised as follows:**

Materials listing in Sections 3.5.2.1.2 and 3.5.2.1.5 should be updated to include the following:

**Materials**

- Fire Barrier Coatings

Table 3.5.2.2 should include the following line item and Plant Specific Note for Flamemastic coatings.

Fire Barriers	FB	Coatings Flamemastic (when used in a qualified Fire Stop configuration)	Inside Air	None	None	None	None	J, 1, 11
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Note 11 - This includes both sides of the Reactor Building/Turbine Building wall cable tray penetrations.

Table 3.5.2.5 should include the following line item for Flamemastic coatings.

Fire Barriers	FB	Coatings Flamemastic (when used in a qualified Fire Stop configuration)	Inside Air	None	None	None	None	J, 2
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**The following information is in addition to what was previously supplied in "TVA Response to RAI 4.4.5-1":**

Materials listing in Sections 3.5.2.1.10 and 3.5.2.1.12 should be updated to include the following:

**Materials**

- Fire Barrier Coatings

Table 3.5.2.2 should include the following line item for Flamemastic used as a Fire Retardant Coating to reduce flame spread.

Fire Barriers	FB	Coatings Flamemastic (when used as a Fire Retardant Coating on exposed cables in open cable trays)	Inside Air	None	None	None	None	J, 1
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Tables 3.5.2.5 and 3.5.2.12 should include the following line item for Flamemastic used as a Fire Retardant Coating to reduce flame spread.

Fire Barriers	FB	Coatings Flamemastic (when used as a Fire Retardant Coating on exposed cables in open cable trays)	Inside Air	None	None	None	None	J, 2
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Table 3.5.2.10 should include the following line item for Flamemastic used as a Fire Retardant Coating to reduce flame spread.

Fire Barriers	FB	Coatings Flamemastic (when used as a Fire Retardant Coating on exposed cables in open cable trays)	Inside Air	None	None	None	None	J, 1
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**The following revisions to Section 3.5 of the LRA are required based on penetration seals at BFN being exposed to an inside air environment and having no aging effects requiring management:**

Table 3.5.2.2 should include the following Plant Specific Note and the following line items should be revised as follows:

Fire Barriers	FB	Elastomers	Inside Air	None	None	VII.G.3-a	3.3.1.20	I, 12
Fire Barriers	FB	Gypsum	Inside Air	None	None	None	None	J, 1

Note 12 - Refer to "**Safety Evaluation Report** Related to the License Renewal of St. Lucie Nuclear Plant, Units 1 and 2," Section 3.5.2.2.1 for summary statement of no applicable aging effects and no aging management required.

Table 3.5.2.5 should include the following Plant Specific Note and the following line item should be revised as follows:

Fire Barriers	FB	Elastomers	Inside Air	None	None	VII.G.4-a	3.3.1.20	I, 8
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Note 8 - Refer to "**Safety Evaluation Report** Related to the License Renewal of St. Lucie Nuclear Plant, Units 1 and 2," Section 3.5.2.2.1 for summary statement of no applicable aging effects and no aging management required.

The following line item in Table 3.5.2.12 should be revised as follows:

Fire Barriers	FB	Thermolag	Inside Air	None	None	None	None	J, 2
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