UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

April 14, 2016

Mr. Joseph W. Shea
Vice President, Nuclear Licensing
Tennessee Valley Authority
1101 Market Street, LP 3R-C
Chattanooga, TN 37402-2801

SUBJECT: BROWNS FERRY NUCLEAR PLANT, UNITS 1, 2, AND 3 - REQUEST FOR ADDITIONAL INFORMATION RELATED TO LICENSE AMENDMENT REQUEST REGARDING EXTENDED POWER UPRATE (CAC NOS. MF6741, MF6742, AND MF6743)

Dear Mr. Shea:

By letter dated September 21, 2015 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML15282A152), as supplemented by letters dated November 13, December 15, and December 18, 2015 (ADAMS Accession Nos. ML15317A361, ML15351A113, and ML15355A413, respectively), Tennessee Valley Authority (TVA, the licensee) submitted a license amendment request (LAR) for Browns Ferry Nuclear Plant, Units 1, 2, and 3. The proposed amendment would increase the authorized maximum steady-state reactor core power level for each unit from 3,458 megawatt thermal (MWt) to 3,952 MWt. This LAR represents an increase of approximately 20 percent above the original licensed thermal power level of 3,293 MWt, and an increase of approximately 14.3 percent above the current licensed thermal power level of 3,458 MWt.

The U.S. Nuclear Regulatory Commission (NRC) staff reviewed the licensee's submittals and determined that additional information is needed. On March 28, 2016, the NRC staff forwarded, by electronic mail, a draft Request for Additional Information (RAI) to TVA. On April 8, 2016, the NRC staff held a conference call to provide the licensee with an opportunity to clarify any portion of the draft RAI and discuss the timeframe for which TVA may provide the requested information. As agreed by the NRC and TVA staff, TVA will respond to the enclosed RAI by May 23, 2016.

If you have any questions, please contact me at 301-415-1447 or Farideh.Saba@nrc.gov.

Sincerely,

Farideh E. Saba

Farideh E. Saba, Senior Project Manager
Plant Licensing Branch II-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

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

Enclosure:
Request for Additional Information

cc w/enclosure: Distribution via Listserv

REQUEST FOR ADDITIONAL INFORMATION

LICENSE AMENDMENT REQUEST REGARDING EXTENDED POWER UPRATE

TENNESSEE VALLEY AUTHORITY

BROWNS FERRY NUCLEAR PLANT, UNITS 1, 2, AND 3

DOCKET NOS. 50-259, 50-260, AND 50-296

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The NRC staff from the Balance of Plant Branch (SBPB), previously in Containment and Ventilation Branch, Division of Safety Systems reviewed the information the licensee provided and determined that the following additional information is required in order to complete the evaluation.

SBPB-RAI 1

The licensee in Section 2.7.3 of Power Uprate Safety Analysis Report (PUSAR) (Attachment 6[1] of letter dated September 21, 2015) states: "The conductance of heat through the building structure to the control room is expected to increase only slightly." What is the source of heat that causes an increase of conductance of heat through the control room building structure under extended power uprate (EPU) conditions?

SBPB-RAI 2

The licensee in Table 2.7-1 of PUSAR states the temperature of the General Floor Area at Elevation (El) 639 will increase to a peak of 128.7 degrees Fahrenheit for the most limiting reactor building room.

(a) Is the General Floor Area at El 639 the most limiting reactor building room in the current analysis and by how much is the peak EPU temperature in this room greater than the peak temperature in the current analysis?

(b) The temperature increase reflects an increase in the heat load from EPU operation. Explain why the HVAC system is adequate to handle this increased heat load in the reactor building.

[1] Attachment 7 contains a non-proprietary version of Attachment 6

SBPB-RAI 3

Section 2.7.5 of the PUSAR does not describe any evaluation of the impact of the EPU on the turbine building ventilation system.

(a) Describe all turbine building equipment changes that impact its heat load and provide a comparison of the power rating between the present and proposed equipment for EPU.

(b) What is the present and the proposed EPU turbine building ventilation system heat load?

(c) Describe the impact and changes in the turbine building ventilation system for EPU.

If you have any questions, please contact me at 301-415-1447 or Farideh.Saba@nrc.gov.

Sincerely,

/RA/

Farideh E. Saba, Senior Project Manager
Plant Licensing Branch II-2
Division of Operating Reactor Licensing
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ADAMS Accession No.: ML16102A339 *by memorandum

OFFICE	DORL/LPLII-2/PM	DORL/LPLII-2/LA	DSS/SCVB[1]/BC*	DORL/LPLII-2/BC	DORL/LPLII-2/PM
NAME	FSaba	BClayton	RDennig	BBeasley	FSaba
DATE	4/12/2016	4/11/2016	3/24/2016	4/14/2016	4/14/2016

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[1] As of April 3, 2016, Ventilation section of SCVB became a part of SBPB.