



Tennessee Valley Authority, 1101 Market Street, Chattanooga, Tennessee 37402

August 21, 2013

10 CFR 50.90
10 CFR 50.91

ATTN: Document Control Desk
U. S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001

Browns Ferry Nuclear Plant, Unit 1
Renewed Facility Operating License No. DPR-33
NRC Docket No. 50-259

Subject: **Tennessee Valley Authority Response to Request for Additional Information Regarding License Amendment Request Under Exigent Circumstances for the Administrative Change to Remove the Notes on Technical Specification Figures 3.4.9-1 and 3.4.9-2**

- References:
1. Letter from TVA to NRC, "License Amendment Request under Exigent Circumstances for the Administrative Change to Remove the Notes on Technical Specification Figures 3.4.9-1 and 3.4.9-2," dated August 14, 2013
 2. Electronic Mail from NRC to TVA, "Request for Additional Information Regarding Tennessee Valley Authority's License Amendment Request Under Exigent Circumstances for the Administrative Change to Remove the Notes on Technical Specification Figures 3.4.9-1 And 3.4.9-2 for Browns Ferry Nuclear Plant, Unit 1 Docket No. 50-259 (TAC No. MF2564)," dated August 16, 2013 (ML13232A392)

On August 14, 2013, Tennessee Valley Authority (TVA) submitted an application under exigent circumstances (Reference 1) to the Nuclear Regulatory Commission (NRC) to remove the Notes from the Browns Ferry Nuclear Plant, Unit 1 Technical Specification Figures 3.4.9-1 and 3.4.9-2 in accordance with the provisions of Title 10 of the Code of Federal Regulations (10 CFR) 50.90. By NRC email dated August 16, 2013 (Reference 2), the NRC forwarded to TVA a Request for Additional Information (RAI) regarding the Reference 1 submittal. Due to the exigent nature of the TVA request for a license amendment, the response was requested to be provided as soon as possible.

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Enclosure 1 to this letter provides the TVA response to the NRC RAI.

There are no regulatory commitments associated with this transmittal. Please direct any questions concerning this matter to Mr. Edward D. Schrull at (423) 751-3850.

I declare under penalty of perjury that the foregoing is true and correct.
Executed on the 21st day of August 2013.

Respectfully,

A handwritten signature in black ink, appearing to read 'J. W. Shea', written over a vertical line that extends from the word 'Respectfully'.

J. W. Shea
Vice President Nuclear Licensing

Enclosure: TVA Response to NRC Request for Additional Information

cc (Enclosure):

NRC Regional Administrator - Region II
NRC Senior Resident Inspector - Browns Ferry Nuclear Plant
State Health Officer, Alabama State Department of Public Health

ENCLOSURE

TVA Response to NRC Request for Additional Information

NRC Request for Additional Information (RAI) Question 1

In the LAR, TVA refers to the non-proprietary report, NEDO-33112, "Pressure-Temperature Curves for TVA Browns Ferry Unit 1" (Agencywide Documents Access and Management System (ADAMS) Accession No. ML043440231), for a description of the fluence calculations. The first paragraph of Section 1.0, "Introduction," of NEDO-33112 states, "This report incorporates a fluence calculated in accordance with the GE Licensing Topical Report NEDC-32983P, which has been approved by the NRC in a SER [14], and is in compliance with Regulatory Guide 1.190. This fluence represents an Extended Power Uprate (EPU) for the rated power of 3952 MWt."

Verify whether the 3,952 MWt power level was assumed for the entire 16 effective full power years (EFPY) exposure period for BFN-1, and verify that NEDC-32983P was the only method used to determine the reactor vessel neutron fluence over the 16 EFPY operating period for BFN-1.

TVA Response

Tennessee Valley Authority (TVA) verifies that the Extended Power Uprate (EPU) power level of 3952 MWt was assumed for the entire 16 effective full power years (EFPY) exposure period for Browns Ferry Nuclear Plant (BFN), Unit 1 as presented in NEDO-33112.

TVA also verifies that the method employed in NEDC-32983P was the only method used to determine the reactor vessel neutron fluence over the 16 EFPY operating period for BFN, Unit 1.

NRC Request for Additional Information (RAI) Question 2

Section IV of Appendix H, "Reactor Vessel Material Surveillance Program Requirements," to Title 10 of the Code of Federal Regulations (10 CFR) Part 50, "Domestic Licensing of Production and Utilization Facilities," specifies requirements for reporting of test results for capsules withdrawn from the reactor pressure vessel (RPV) in accordance with an approved RPV materials surveillance program. Those requirements specify that summary test reports are due within one year after the date of capsule withdrawal unless an extension is granted by the Director, Office of Nuclear Reactor Regulation (NRR), and if a change in the Technical Specifications is required, either in the pressure-temperature (P-T) limits or in the operating procedures required to meet the limits, the expected date for submittal of the revised Technical Specifications must be provided with the report. NRC is aware that a capsule was removed for testing from BFN Unit 2 in February 2010, and a summary test report is available as EPRI Technical Report 3002000078, "BWRVIP-271NP: BWR Vessel and Internals Project, Testing and Evaluation of the Browns Ferry Unit 2 120° Capsule," April 2013 (ADAMS Accession No. ML13227A353). NRC is also aware that the test results from the BFN Unit 2 120° capsule are applicable to BFN-1 per the Boiling Water Reactor Vessel and Internals Project (BWRVIP) Integrated Surveillance Program (ISP), as documented in EPRI Technical Report 1025144NP, "BWRVIP-86NP, Revision 1-A: BWR Vessel and Internals Project, Updated BWR Integrated Surveillance Program (ISP) Implementation Plan," May 2013 (ADAMS Accession No. ML13176A097).

Provide an evaluation of the impact of the BFN Unit 2 120° capsule test results on the 16 EFPY P-T curves for BFN-1 included in TVA's LAR.

TVA Response

The BFN, Unit 2 120° surveillance capsule was removed for testing in March 2011 during BFN, Unit 2 Refueling Outage 16. The Electric Power Research Institute (EPRI) / Boiling Water Reactor Vessel and Internals Project (BWRVIP) provided results to TVA from the evaluation of the BFN, Unit 2 120° capsule surveillance data on April 10, 2013. These results were also provided separately to the NRC by the BWRVIP in accordance with 10 CFR 50, Appendix H. In accordance with the reporting requirements of 10 CFR 50, Appendix H and BWRVIP-135, "ISP Data Source Book and Plant Evaluations," Revision 1, September 2007, if the Pressure-Temperature (P-T) limits curves are determined to be non-conservative after consideration of this new data, TVA is required to notify the NRC and submit updated P-T limits curves to the NRC within one year following receipt of this information (i.e., by April 10, 2014). BFN has initiated Problem Evaluation Report (PER) 750662 to provide for review of the data and to determine the effects, if any, on plant P-T limits curves and leak test temperatures. Upon completion of the review, if P-T limits curves are determined to be non-conservative, TVA will notify the NRC of any required changes to the P-T limits curves in accordance with 10 CFR 50 Appendix H.