



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

August 16, 2016

LICENSEE: Tennessee Valley Authority

FACILITY: Browns Ferry Nuclear Plant, Units 1, 2, and 3

SUBJECT: SUMMARY OF JULY 19 2016, MEETING WITH TENNESSEE VALLEY AUTHORITY REGARDING EXTENDED POWER UPRATE LICENSE AMENDMENT REQUEST FOR BROWNS FERRY NUCLEAR PLANT (CAC NOS. MF6741, MF6742, AND MF6743)

On July 19, 2016, a Category 1 public meeting was held between the U.S. Nuclear Regulatory Commission (NRC) and representatives of Tennessee Valley Authority (TVA, the licensee) at NRC Headquarters, One White Flint North, 11555 Rockville Pike, Rockville, Maryland. The purpose of the meeting was for TVA to present the Browns Ferry Nuclear Plant, Units 1, 2, and 3 (Browns Ferry), Extended Power Uprate (EPU) License Amendment Request (LAR) overview, a discussion of the status of the NRC reviews and TVA submittals, and the upcoming activities/due dates for the EPU LAR at Browns Ferry. The meeting notice and agenda, dated June 20, 2016, are available in the Agencywide Documents Access and Management System (ADAMS) under Accession No. ML16200A431. A list of attendees is enclosed.

The licensee submitted the EPU LAR on September 21, 2015 (ADAMS Accession No. ML15282A152). Upon approval of the EPU LAR, the licensee plans to implement the EPU in the spring of 2018 for Unit 3, the fall of 2018 for Unit 1, and the spring of 2019 for Unit 2. The proposed amendment would increase the authorized maximum steady-state reactor core power level for each unit from 3,458 megawatts 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 licensee presented informational slides at the meeting. The licensee's presentation document, which was provided prior to the meeting and attached to the meeting notice, is available under ADAMS Accession No. ML16200A259. The licensee's presentation began with a brief historical background and Browns Ferry EPU project team goals. The licensee then proceeded with an overview of elements of the LAR submittal, schedule milestones, and status of modifications required to implement EPU. TVA also presented and discussed the completed and planned milestones and modifications. TVA explained that many of these modifications are already completed, and the replaced equipment has been tested and is operating at the current power level. Significant plant modifications, such as replacement of the steam dryers and modifications to high pressure turbines, are planned following NRC approval of the licensee's proposed EPU LAR. The NRC staff added that it is also performing, in parallel to its safety evaluation of the EPU, a review of the licensee's submittals associated with the impact of EPU

on the environment. The NRC is scheduled to issue a draft environmental assessment (EA) and finding of no significant impact (FONSI) for public comment in November of 2016. The final EA and FONSI are planned for issuance by May 31, 2017.

The meeting then proceeded with an overview of the status of the LAR review regarding the NRC staff requests for additional information (RAIs) and TVA responses to these RAIs. Currently, 205 RAIs have been transmitted to TVA by official letter. TVA had responded to 159 of the 205 issued RAIs prior to the meeting on July 19, 2016. Additional responses were submitted to the NRC following the meeting. TVA is scheduled to respond to all currently issued RAIs by August 12, 2016. Additional information may be requested by the NRC staff after its review of TVA responses. The TVA EPU team goal is to close all of the open items regarding the NRC RAIs by November 31, 2016.

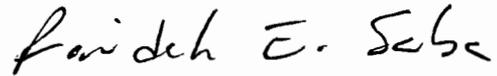
The licensee next presented three regulatory audits conducted by the NRC staff during April and May of 2016. TVA supported these audits at a facility located in Rockville, Maryland, to facilitate NRC staff's participation. Audits of replacement steam dryers design and analysis (April 19 to April 21, 2016), containment accident pressure elimination analyses (May 3 to May 5, 2016), and spent fuel pool criticality safety analysis and Boral monitoring program (May 10 to May 11, 2016), allowed the TVA staff to gain a better understanding of the NRC questions and for the NRC staff to more effectively conduct its review and gain insights on the licensee's program and processes. Overall, the audits were very successful. The NRC staff added that all the audit plans and audit summary reports are officially issued and available to the public in ADAMS.

At the end of the presentation, the NRC staff questioned TVA staff regarding any lessons learned or unexpected findings by TVA engineers as a result of new equipment modifications or installations being accomplished in support of the proposed EPU LAR. TVA's response was that generally there have been no significant issues as a result of the modifications or installations to balance-of-plant components at Browns Ferry and that, as a reminder to the staff and public, the units continue to operate below the thermal limits being proposed in the EPU application, and the equipment has yet to operate at the newer (higher) thermal limit thresholds. TVA did, however, indicate that design/installation issues with some of the modifications were identified through the engineering review process and that resolution of these issues had occurred prior to installation of the modifications.

There were two members of the public in attendance by telephone. Public Meeting Feedback forms were not received. Following questions and answers between the NRC staff and TVA representatives, a member of the public asked the NRC staff to verify that the NRC has approved all three units at Browns Ferry to operate during the extended period of operation (EPO) (Unit 1 to December 20, 2033, Unit 2 to June 28, 2034, and Unit 3 to July 2, 2036). The NRC staff confirmed that all three units' licenses were renewed by the NRC's letter dated May 4, 2006 (ADAMS Accession No. ML060970332). The member of the public also questioned whether the modifications listed in the licensee's slides are done or will be completed for all three units and why it took over 10 years for the licensee to complete some of these modifications. The NRC staff explained that, as presented in the background slides by TVA, the licensee had previously submitted EPU LARs for the Browns Ferry units in 2004 that were withdrawn in 2014. As such, TVA completed some of the modifications that did not require approval by the NRC during the time that the previous LARs were being reviewed by the staff.

However, TVA plans to complete the remaining modifications that require the NRC's approval during the outage of each unit after the NRC completes its review and approves the current EPU LAR.

Please direct any inquiries to me at 301-415-1447 or [Farideh.Saba@nrc.gov](mailto:Farideh.Saba@nrc.gov).

A handwritten signature in black ink that reads "Farideh E. Saba". The signature is written in a cursive, slightly slanted style.

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, 50-296

Enclosure:  
List of Attendees

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LIST OF ATTENDEES

JULY 19, 2015, PUBLIC MEETING WITH TENNESSEE VALLEY AUTHORITY

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

LICENSE AMENDMENT REQUEST REGARDING EXTENDED POWER UPRATE

<b>Name</b>	<b>Organization</b>
Farideh Saba	Nuclear Regulatory Commission (NRC)
Russ Haskell	NRC
Muhammad Razzaque	NRC
George Thomas	NRC
Michael Breach	NRC
Manuel Jimenez	NRC
David Nold	NRC
Yong Li	NRC
Todd Hilsmeier	NRC
Dan Warner*	NRC
James Danna*	NRC
Eric Stamm*	NRC
Gerard Doyle	Tennessee Valley Authority (TVA)
Pete Donahue	TVA
Dan Green	TVA
Ed Schrull	TVA
Ruth Thomas*	Public
Robert Sanders*	Public

\*Participated by phone

Enclosure

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*/RA/*

Farideh E. Saba, Senior Project Manager  
Plant Licensing Branch II-2  
Division of Operating Reactor Licensing  
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NAME	FSaba	BClayton (LRonewicz for)	TOrf	FSaba
DATE	8/8/2016	8/8/2016	8/16/2016	8/16/2016

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