



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

April 11, 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 – REGULATORY
AUDIT PLAN FOR APRIL 19 - 21, 2016, AUDIT AT EXCEL FACILITY IN
ROCKVILLE, MARYLAND, IN SUPPORT OF EXTENDED POWER UPRATE
LICENSE AMENDMENT REQUEST (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 submitted a license amendment request (LAR) for the 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.

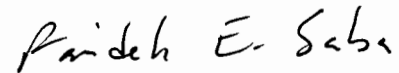
To support its safety evaluations, the Nuclear Regulatory Commission staff will conduct an audit at the EXCEL Services Corporation facility in Rockville, Maryland, from April 19 to 21, 2016. The audit plan to support the review of the extended power uprate (EPU) LAR regarding the structural adequacy of the steam dryer is enclosed.

J. Shea

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

Sincerely,

A handwritten signature in black ink that reads "Farideh E. Saba". The signature is written in a cursive style with a large initial 'F'.

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

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

Enclosure:
Audit Plan for EPU LAR

cc w/encl: Distribution via Listserv

REGULATORY AUDIT PLAN FOR APRIL 19 to 21, 2016, AUDIT AT EXCEL FACILITY IN
ROCKVILLE, MARYLAND, TO SUPPORT REVIEW OF
EXTENDED POWER UPRATE LICENSE AMENDMENT REQUEST
TENNESSEE VALLEY AUTHORITY
BROWNS FERRY NUCLEAR PLANT, UNITS 1, 2, AND 3
DOCKET NOS. 50-259, 50-260, AND 50-296

Background

The U.S. Nuclear Regulatory Commission (NRC) staff is currently engaged in a review of a license amendment request (LAR) for the Browns Ferry Nuclear Plant (BFN), Units 1, 2, and 3. 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 an LAR for the BFN, 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 NRC staff has determined that a regulatory audit of the BFN LAR should be conducted in accordance with the Nuclear Reactor Regulation (NRR) Office Instruction LIC-111, "Regulatory Audits," for the NRC staff to gain a better understanding of the licensee's calculations and other aspects of the LAR.

Regulatory Audit Basis

The basis of this audit is TVA's LAR and NUREG-0800, "Standard Review Plan for the Review of Nuclear Power Plants: Section 3.9.2, "Dynamic Testing and Analysis of Systems, Structures and Components," Section 3.9.1, "Special Topics for Mechanical components," Section 3.9.3, "ASME Code Class 1, 2, and 3 Components, and Component Supports, and Core Support Structures," and Section 3.9.5, "Reactor Pressure Vessel Internals."

This audit will provide information necessary to complete the NRC staff's evaluation of the proposed extended power uprate (EPU) LAR for the NRR Mechanical Engineering Branch (EMCB).

Enclosure

Regulatory Audit Scope

The scope of this regulatory audit will include supporting calculation documents used in the application for structural adequacy of steam dryer and mechanical components.

Information Necessary for the Regulatory Audit

The licensee is requested to have the draft responses available on site for the audit team for EMCB scope draft request for additional information (steam dryer and mechanical components) transmitted to you by e-mail on March 21 and March 25, 2016. The draft responses could be provided electronically or by paper copies. If provided electronically, the licensee is requested to have at least two computers available for the audit team, with a printer attached.

Additional information needs identified during the audit will be communicated to the designated point of contact.

The NRC staff also requests the licensee to make personnel who are familiar with the LAR (including site staff and contractors, if appropriate) accessible upon request (either in person or by phone). The personnel should be able to respond to NRC staff questions.

Team Assignments / Resource Estimates

Area of Review	Assigned Auditor
Audit Team Lead	Farideh Saba (NRC)
Technical Reviewer	Chakrapani Basavaraju (NRC)
Technical Reviewer	Michael Breach (NRC)
Technical Reviewer	Vikram Shah (NRC Contractor from Argonne National Laboratory)
Technical Reviewer	Stephen Hambric (NRC Contractor from Pennsylvania State University)
Technical Reviewer	Samir Ziada (NRC Contractor from McMaster University, Canada)

Logistics

The audit will be conducted at the EXCEL Services Corporation facility in Rockville, Maryland, from April 19 to 21, 2016. Entrance and exit briefings will be held at the beginning and end of this audit, respectively. The licensee is requested to provide a room for the use by the audit team.

The audit will start at 9:00 a.m. on Tuesday, April 19, 2016, and conclude on Thursday, April 21, 2016. Our tentative schedule for the audit is as follows:

April 19, 2016

9:00 a.m.	Check-in at EXCEL Office – meet licensee contact(s), setup for entrance meeting.
9:30 a.m.	Entrance Meeting - introductions, audit activities, goals, and logistics.
10:00 a.m.	NRC Team Breakout/Discussion with the licensee.
12:00 p.m.	Lunch.
1:00 p.m.	NRC Team Breakout/Discussion with the licensee.
4:00 p.m.	Audit Team Caucus.
4:30 p.m.	NRC/Licensee Interim Meeting.
5:00 p.m.	Audit Team Daily Closeout.

April 20, 2016

9:00 a.m.	NRC Team Breakout/ Discussion with the licensee.
12:00 p.m.	Lunch.
1:00 p.m.	NRC Team Breakout/Discussion with the licensee.
4:00 p.m.	Audit Team Caucus.
4:30 p.m.	NRC/Licensee Interim Meeting.
5:00 p.m.	Audit Team Daily Closeout.

April 21, 2016

9:00 a.m.	NRC Team Breakout/ Discussion with the licensee.
12:00 p.m.	Lunch.
1:00 p.m.	NRC Team Breakout/Discussion with the licensee.
3:30 p.m.	Audit Team Caucus.
4:00 p.m.	NRC/Licensee Interim/Exit Meeting.
5:00 p.m.	NRC/Licensee Audit Closeout.

Deliverables

At the conclusion of the audit, the NRC staff will conduct an exit briefing and will provide a summary of audit results in each subject area defined in the audit scope. An audit report/summary will be issued to the licensee within approximately 90 days from the end of the audit. Additionally, the results of the audit will be utilized to focus the scope of any requests for additional information issued in the course of this review.

J. Shea

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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 II-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

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

Enclosure:
Audit Plan for EPU LAR

cc w/encl: Distribution via Listserv

DISTRIBUTION:

PUBLIC	LPL2-2 R/F
RidsACRS_MailCTR Resource	RidsNrrDorl Resource
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RidsNrrLABClayton Resource	MBreach, NRR
RidsRgn2MailCenter Resource	CBasavaraju, NRR

ADAMS Accession No.: ML16085A301

**by memorandum*

OFFICE	NRR/DORL/LPLIV-1/PM	NRR/DORL/LPLII-2/PM	NRR/DORL/LPLII-2/LA
NAME	SLingam	FSaba	BClayton
DATE	3/29/2016	3/29/2016	3/29/2016
OFFICE	NRR/DE/EMCB/BC(A)*	NRR/DORL/LPLII-2/BC	NRR/DORL/LPLII-2/PM
NAME	YLi	BBeasley	FSaba
DATE	3/29/2016	4/11/2016	4/11/2016

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