



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

July 18, 2012

LICENSEE: Tennessee Valley Authority

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

SUBJECT: SUMMARY OF JUNE 18, 2012, MEETING WITH THE TENNESSEE VALLEY  
AUTHORITY TO DISCUSS PROPOSED FUEL TYPE CHANGE  
(TAC NOS. ME8766, ME8767, AND ME8768)

On June 18, 2012, the U.S. Nuclear Regulatory Commission (NRC) staff conducted a Category 1 public meeting with Tennessee Valley Authority (TVA, the licensee) at NRC Headquarters, 11555 Rockville Pike, One White Flint North, Rockville, Maryland. The purpose of the meeting was to discuss TVA's proposal to change the fuel type for Browns Ferry Nuclear Plant (BFN) Units 1, 2, and 3. Enclosure 1 contains a list of attendees. The meeting notice and agenda dated May 29, 2012, are available in the Agencywide Documents Access and Management System (ADAMS) Accession No. ML12150A120. The licensee presented a slide presentation [see the ADAMS Accession No. ML12170A014].

### DISCUSSION

The licensee provided an overview regarding the pending submittal by TVA regarding a transition from AREVA ATRIUM-10 to ATRIUM-10XM fuel. The proposed fuel change would be targeted for the spring of 2015 for Unit 2, spring of 2016 for Unit 3, and the fall of 2016 for Unit 1. It was discussed that the methodology for performing the analyses related to the ATRIUM-10XM fuel analyses was similar with three exceptions. These exceptions were related to the:

- Addition of RODEX4 for thermal mechanical analyses;
- Addition of ACE for critical power ratio monitoring; and
- Replacement of SAFLIM2 safety limit methodology with SAFLIM-3D.

It was mentioned that the proposed submittal would be similar in scope to a submittal from a similar boiling-water reactor facility. The NRC staff identified that the precedent discussed contained a mixed core and, therefore, the usefulness of the precedent may not be substantial. It was suggested that the licensee review the associated safety evaluation limitations and conditions related to the second cycle for the similar facility, as the second cycle may possibly better represent the proposed BFN submittal.

The affect that the ongoing activities related to issues, thermal conductivity degradation and the ACE correlation was discussed. The NRC staff inquired as to TVA's proposed path forward should the generic efforts not be complete upon submittal of the proposed amendment request. TVA indicated that should the generic efforts not be complete, a plant-specific analysis would be provided. The NRC staff questioned whether additional amendment requests would be needed to support the proposed fuel changes. TVA identified that changes to the safety limit minimum critical power ratio (SLMCPR) may be needed on Units 1 and 3.

The licensee addressed the affect the proposal would have on the extended power uprate (EPU) submittal. The licensee explained that Unit 2 would be the first to use the new fuel type, if approved, and that would be at current licensed thermal power. Units 1 and 3's first use of the new fuel would possibly be at EPU conditions. It was noted that the current docketed EPUs for BFN were submitted assuming initial cores of either GE-14 or ATRIUM-10 fuel and not the proposed ATRIUM-10XM. TVA indicated that the revision of the EPU would be the topic of a future meeting with the NRC staff.

The NRC staff commented that the proposed submittal dates appear to be within the same timeframe as other significant licensing actions including a voluntary fire protection licensing bases change, the extended power uprate, and other activities related to the Fukushima orders and requests for information. The comment was related to the availability of resources for both the NRC and the licensee given the significant amount of review needed for all these items and the proposed fuel change.

No members of the public were in attendance, and one feedback form was received. No commitments or regulatory decisions were made by the NRC staff during the meeting.

Sincerely,

*/RA/*

Eva A. Brown, 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: List of Attendees

cc w/encl: Distribution via Listserv

JUNE 18, 2012  
LIST OF ATTENDEES  
PUBLIC MEETING WITH  
TENNESSEE VALLEY AUTHORITY AND  
THE NUCLEAR REGULATORY COMMISSION  
REGARDING PROPOSED FUEL TYPE CHANGE  
FOR BROWNS FERRY NUCLEAR PLANT, UNITS 1, 2, AND 3

U. S. NUCLEAR REGULATORY COMMISSION

Anthony Mendiola  
Diana Woodyatt  
Andrew Proffitt  
Eva Brown

TENNESSEE VALLEY AUTHORITY

Greg Storey  
Tom Eichenberg  
Tom Hess

AREVA

Gayle Elliott  
Peter Newby  
Al McGinnis\*  
Dave McBirney\*

\* By phone

Enclosure

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