



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

September 14, 2009

LICENSEE: Tennessee Valley Authority

FACILITIES: Browns Ferry Nuclear Plant, Unit 1

SUBJECT: SUMMARY OF AUGUST 11, 2009, MEETING WITH THE TENNESSEE VALLEY AUTHORITY TO DISCUSS PROPOSED EXTENDED POWER UPRATE ANALYSES PATH FORWARD (TAC NO. MD5262)

On August 11, 2009, 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 the licensee's proposed path forward for Browns Ferry Nuclear Plant (BFN) Unit 1 extended power uprate. The enclosure contains a list of attendees. The licensee presented a slide presentation (see the Agencywide Documents Access and Management System Accession No. ML092440273).

#### DISCUSSION

In October 2008, TVA provided a proposal regarding changes in the method proposed for removal of the electrical noise component of the steam line signal. The NRC had indicated various concerns including the removal of the low power strain gage data from current licensed thermal power (CLTP) strain gage data across the whole frequency range. After some review, TVA informed the NRC staff that the low flow noise subtraction approach would no longer be used, and modifications and additional substructure modeling would be employed to ensure the minimum stress ratio criteria (SR) of 2.0 is met. The analysis is being done both at 110 percent CLTP as well as 120 percent CLTP. The power levels were chosen reflect an uprate to the units without the need from modifications to the steam dryer (110 percent CLTP) and with the modifications (120 percent CLTP). In the event of an approval of the amendment request mid-cycle or a revision to the request to a lower power, both states are to be provided.

The licensee went over the additional modifications that may need to be installed to ensure the SR continues to be met. The NRC staff indicated that, consistent with discussions held earlier that week, the licensee should ensure that the all assumptions and requirements related to the American Society of Mechanical Engineers Table NG 3352-1 are met should the fatigue factors in the table be used in the revised steam dryer stress analysis.

The licensee went over their understanding of the current issues related to containment accident pressure (CAP). The licensee indicated that they were considering various options to address the Advisory Committee for Reactor Safeguards' concerns over CAP magnitude and duration. One option is a derate option. In this option, the approved maximum thermal power for each BFN unit would be varied based on the temperature of the ultimate heat sink, which is the Tennessee River. It was forecasted that this would result in the units derating (reducing power) to ~110 percent CLTP during the summer months. The licensee's intent would be to maintain the CAP credit needed to around 3 pounds per square inch gage (psig), which

represents an increase of ~1.2 psi from the CLTP requirements for a significant fire event. The NRC staff expressed concern over the potential complexity of such a request and that the review may take significantly longer than the licensee's proposed schedule. Several considerations that would need to be addressed were provided to the licensee, should they decide to submit such a proposal.

The NRC staff outlined five proposed options for going forward and the likelihood of success, with success being measured as:

- maintain the status quo;
- additional NRC review of the technical issues surrounding pump cavitation;
- generic resolution;
- reject the amendment request; or
- the derate option.

The licensee made no indication of which option they intended to pursue, but did note that the derate option would be operationally complex.

No members of the public were in attendance, and no feedback forms were 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 No. 50-259

Enclosure: List of Attendees

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