

July 28, 2005

10 CFR 55.46

U.S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Mail Stop: OWFN P1-35  
Washington, D.C. 20555-001

Gentlemen:

In the Matter of	)	Docket Nos. 50-259
Tennessee Valley Authority	)	50-260
		50-296

**BROWNS FERRY NUCLEAR PLANT (BFN) UNITS 1, 2, AND 3 -  
NOTIFICATION OF PLANT REFERENCE SIMULATOR ADDITION**

The purpose of this letter is to notify the NRC of the completion of the installation and acceptance testing of TVA's second plant reference simulator at the Browns Ferry Nuclear (BFN) Plant. This second simulator was installed to support BFN Unit 1 recovery and three-unit operation. Use of the simulator for operator training is scheduled to begin on August 1, 2005.

The second simulator is a plant reference simulator, and meets the corresponding requirements for a plant reference simulator contained in 10 CFR 55.46 and the guidance contained in Regulatory Guide 1.149, Revision 1, and ANSI/ANS-3.5-1985. TVA has completed the full scope of simulator performance testing prescribed in ANSI/ANS-3.5-1985 and endorsed by Regulatory Guide 1.149, Revision 1. The full scope testing and documentation of this testing would have been known formerly as an initial simulator certification under the previous version of the simulator rule. In TVA's judgment, this testing scope was necessary and appropriate to confirm simulator performance simulates actual plant performance with acceptable accuracy.

The new BFN simulator is a full scope, plant reference simulator based on BFN Unit 3 configuration. To address equipment obsolescence issues, Unit 1 Control Room equipment designs were used in several instances. TVA anticipates that BFN Units 2 and 3 control rooms will eventually be upgraded to these newer equipment designs. Several other configuration differences exist due to cost or other considerations. The key configuration differences between the BFN Unit 3 simulator and the reference unit include:

- Westronics paperless recorders were substituted for the Yokogawa recorders currently in use on Unit 3 due to obsolescence and unavailability of the Yokogawa recorder design. This is consistent with modifications being made to the Unit 1 control room design as part of its restart effort.
- A Westronics recorder was substituted for the Panalarm Leak Detection System due to obsolescence and unavailability of the Panalarm System components. This is consistent with modifications being made to the Unit 1 control room design as part of its restart effort.
- Visual, non-functional simulation of the Traversing Incore Probe (TIP) System panels has been installed. Following completion of its design, TVA plans to add to the simulator the upgraded TIP system design being installed in Unit 1 control room as part of its restart effort.
- The Power Range Neutron Monitoring (PRNM) System and Panel 3-9-14 is not simulated because its location at the back of the simulated control room would have blocked view from the instructor station. A soft panel emulation was substituted for the PRNM panels.
- LED lamps in the full core display and annunciator windows were substituted for incandescent lamps to eliminate associated heat and maintenance issues.
- Newer monitor design was used for the Integrated Computer System display. This is consistent with modifications being made to the Unit 1 control room design as part of its restart effort.

The above differences have been noted in the simulator certification report as exceptions. A training needs

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assessment has determined that these exceptions have a low impact on training and do not significantly detract from training scenarios and the ability to meet the key training objectives. Other minor differences that may exist for short periods of time will be maintained in the Unit 3 "Browns Ferry Simulator/Unit Differences" listing, which is reviewed with each crew of trainees. The BFN Unit 3 simulator certification package and supporting documentation is available onsite for NRC review.

There are no new commitments contained in this letter. If you have any questions, please contact Tommy Albright, Simulator Engineering Manager, at (256) 729-3434 or myself at (256) 729-2636.

Sincerely,

Original signed by:

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(Via NRC Electronic Distribution)

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