

January 10, 2005

Mr. Karl W. Singer  
Chief Nuclear Officer and  
Executive Vice President  
Tennessee Valley Authority  
6A Lookout Place  
1101 Market Street  
Chattanooga, TN 37402-2801

SUBJECT: BROWNS FERRY UNITS 1, 2, AND 3 - RESULTS OF ACCEPTANCE REVIEW  
REGARDING REQUEST TO EXTEND TECHNICAL SPECIFICATION  
CHANNEL CALIBRATION FREQUENCIES (MC4070, MC4071, AND MC4072)  
(TS-447)

Dear Mr. Singer:

On August 16, 2004, the Tennessee Valley Authority (TVA, the licensee) submitted a request to extend the channel calibration frequency requirements for instrumentation in the high pressure coolant injection, reactor core isolation cooling, and reactor water core isolation cooling systems. The technical bases provided is based primarily on an Instrumentation, Systems and Automation Society of America (ISA) Standard, ISA-S67.04-1994, "Setpoints for Nuclear Safety-Related Instrumentation."

Revision 1 of Regulatory Guide (RG) 1.105, "Setpoints for Safety-Related Instrumentation," was issued in 1976 with no reference to any industry standard, while Revision 2-1986 and Revision 3-1999 respectively endorsed 1982 and 1994 revisions of ISA-S67.04. This ISA standard provides guidance for establishing and maintaining the instrumentation setpoints. The 1982 revision of the ISA standard requires recording sufficient as-left and as-found limiting safety system setpoint data for each instrument channel to determine the true setpoint in terms of measured or derived process variables, and stated:

Should these data indicate drift rates considerably less than originally expected, testing intervals or tolerances may be revised accordingly, with suitable justification and documented.

TVA's justification for the proposed change does not provide sufficient details regarding the analytical limits associated with the values, the test data evaluation, extrapolation of 3-month test results for a 24-month test interval, and the instruments' reliability. RG 1.105, Revision 3 states that ISA-67.04 provides limited guidance on drift evaluations and uncertainty terms development for the evaluation of an instrument surveillance interval and the Nuclear Regulatory Commission (NRC) staff has generally accepted drift evaluations based on statistical prediction techniques. The NRC staff provided additional guidance for performing such evaluations in Generic Letter (GL) 91-04, "Changes in Technical Specification Surveillance Intervals to Accommodate a 24-Month Fuel Cycle."

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In addition, the setpoints in the submittal are based on setpoint Allowable Values established by use of ISA 67.04 Part 2 Method 3. As indicated in a letter from Mr. Michael Marshall to Mr. Karl Singer dated January 6, 2005, the NRC staff finds the use of Method 3 to establish these setpoints unacceptable in the form currently submitted. Based on the above, the NRC staff has determined that the submittal fails to provide sufficient justification to support the proposed surveillance interval change from 3-month to 24-month versus the 18-month to 24-month (maximum of 30 months) instrumentation calibration interval change discussed in GL 91-04. Unless the submittal is revised within 60 days to satisfactorily address the deficiencies noted, the NRC staff will consider all efforts on this submittal as complete.

If you have any questions, please contact Ms. Eva Brown, at (301) 415-2315 or Ms. Margaret Chernoff at (301) 415-4041.

Sincerely,

***/RA MChernoff for/***

Michael L. Marshall, Jr., Chief, Section 2  
Project Directorate II  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

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

cc: See next page

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Mr. Karl W. Singer  
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