

January 6, 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 - REQUEST FOR INFORMATION
REGARDING STATUS OF AMENDMENTS USING METHOD 3
(TAC NOS. MC1330, MC1427, MC2305, MC3812, MC4070, MC4071, MC4072,
MC4161, MC3743, AND MC3744)

Dear Mr. Singer:

The Tennessee Valley Authority (TVA, the licensee) has submitted six license amendment requests (TS-418, TS-431, TS-434, TS-437, TS-443, TS-447) since November 2003 using instrumentation setpoints established by means of the Instrumentation, Systems and Automation Society of America (ISA) Standard, ISA-S67.04-1994, "Setpoints for Nuclear Safety-Related Instrumentation." The U.S. Nuclear Regulatory Commission (NRC) staff has determined that the setpoint Allowable Values (AV) established by means of ISA 67.04 Part 2 Method 3 (Method 3) do not provide adequate assurance that a plant will operate in accordance with the assumptions upon which the plant safety analyses have been based. The NRC staff's safety concerns have been described in a letter from Mr. Ledyard Marsh to Mr. Alex Marion of the Nuclear Energy Institute (NEI), which is available on the public website under ADAMS Accession Number ML041690604. The issue has also been discussed in various public meetings held in June and July 2004.

The NRC staff is currently in discussions with the industry and other external stakeholders formulating generic action on this subject. It is presently clear, however, that the NRC staff will not be able to accept any requested Technical Specification (TS) changes that are based upon the use of Method 3, unless the method is modified to alleviate the NRC staff's technical concerns. In particular, each setpoint limit in the TS must ensure at least 95 percent probability with at least 95 percent confidence that the associated action will be initiated with the process variable no less conservative than the initiation value assumed in the plant safety analyses. In addition, the operability of each instrument channel addressed in the setpoint-related TS must be ensured by the TSs. That is, conformance to the TS must provide adequate assurance that the plant will operate in accordance with the safety analyses. Reliance on settings or practices outside the TS and not mandated by them is inadequate.

The NRC staff has determined that AV computed in accordance with ISA Method 1 or 2 do provide adequate assurance that the safety analysis limits will not be exceeded and that an entirely different approach can be adopted that provides the required assurance. This alternative approach is based upon the performance of an instrument channel rather than

directly upon the measured trip setting and is designated Performance-Based TS. The Performance-Based TS sets limits on acceptable nominal setpoints, and the observed deviation in the measured setpoint from the end of one test to the beginning of the next. This approach has been accepted for use at Ginna (ADAMS Accession Number ML041180293). In conversations with TVA, the NRC staff has discussed several alternative approaches similar to the Ginna approach that provide a reasonable assurance of safety. As always, TVA is welcome to propose other alternative approaches that provide the indicated confidence, but such alternatives must be presented in detail and must be shown explicitly to provide adequate assurance that the safety analysis assumptions will not be violated.

In a discussion with the TVA staff, the possibility of delaying a revision to these submittals until completion of generic actions by the NEI was discussed. NEI has recently submitted a White Paper concerning this matter for NRC consideration on December 17, 2004. As always, TVA may choose to endorse whatever approach and justification is described in that White Paper, or to act independently of the NEI. However, the NRC staff has six amendment requests tied to the resolution of the issue. Since these requests, as currently submitted, are based on a methodology that the NRC staff has found unacceptable, the NRC staff requests that TVA revise the applications to address the NRC staff's safety concerns or provide a schedule for submittal of the revised applications, or withdraw the requests and resubmit when the generic issue has been resolved. Otherwise, the NRC staff can proceed regarding the ongoing reviews with the current approach. The NRC staff discussed this request with Mr. Tim Abney on January 04, 2005, and he agreed that a response would be provided within 30 days of the date of this letter.

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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