

August 14, 2006

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 NUCLEAR PLANT, UNIT 1 - REQUEST FOR ADDITIONAL
INFORMATION REGARDING OSCILLATION POWER RANGE MONITOR
(TAC NO. MC9565)(TS-443)

Dear Mr. Singer:

By letter dated January 6, 2006, Tennessee Valley Authority (TVA) submitted a request for a Technical Specification change to activate the thermal-hydraulic stability monitoring instrumentation. The oscillation power range monitor (OPRM) module of the Power Range Neutron Monitoring System is designed to provide TVA's solution regarding reactor stability as requested by Generic Letter 94-02. TVA intends to operate the OPRM module in the "armed" mode when the unit returns to power operations.

The U. S. Nuclear Regulatory Commission (NRC) staff has reviewed TVA's submittal and finds that a response to the enclosed request for additional information is needed before we can complete the review. A response is requested within 45 days of receipt of this letter to support the NRC staff's review schedule.

If you have any questions, please contact me at (301) 415-4041.

Sincerely,

/RA/

Margaret H. Chernoff, Project Manager
Plant Licensing Branch II-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-259

Enclosure: Request for Additional Information

cc w/encl: See next page

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REQUEST FOR ADDITIONAL INFORMATION

RELATING TO THE OSCILLATION POWER RANGE MONITOR ACTIVATION

TENNESSEE VALLEY AUTHORITY

BROWNS FERRY NUCLEAR PLANT, UNIT 1

DOCKET NO. 50-259

1. Provide the analysis or reference document that links the configuration of the Unit 2 system to the configuration of the system that will be activated for Unit 1. This analysis should include any unit and cycle specific changes and the justifications that these changes do not affect the Unit 1 system capability to meet the system design requirements.
2. In the Extended Power Uprate (EPU) Technical Specification (TS) change request (TS-431) Tennessee Valley Authority requested an EPU from 3293 to 3952 (approximately 20.012 percent) megawatts thermal (MWt). The General Electric (GE) Licensing Topical Reports (LTRs) NEDO-32465-A and NEDC-32410P-A identify the power threshold to be 30 percent which corresponds to 987.9 MWt ($.3 \times 3293 = 987.9$). The 25 percent rated thermal power threshold requested in TS-443 (ML060180477) is 988 MWt ($.25 \times 3952 = 988$) which is slightly nonconservative when compared to that of the approved LTR. Provide justification or explanation.
3. The oscillation power range monitor (OPRM) function trips the plant when certain conditions are reached. Provide documentation on the method for determining the allowable value for this trip condition. Describe how the allowable values are documented and implemented.
4. Describe what TS Bases changes will be made as a result of the activation of the OPRM. Are they consistent with the LTRs? Justify any deviations.
5. Since this TS change (TS-443) involves the activation of the OPRM without a trial period as described in the GE LTR, describe related experiences with Units 2 and 3, as well as provide justification for this deviation from the approved plans.
6. Provide the entire proposed TS section 3.3.1.1 and the associated Bases section. Provide justification for any differences in the surveillance requirements for 2.f of Table 3.3.1.1-1 of the TS and that of NEDC-32410P-A Supplement 1 (see page H-10).
7. Please describe in detail the current implementation status of the OPRM system for Browns Ferry Unit 1, including hardware and software modifications, operating experience for establishing the setpoints used to arm the proposed OPRM system, the detailed procedures to finalize system calibration and trip set-points based on the approach stated in NEDO-32465-A, "Reactor Stability Detect and Suppress Solutions Licensing Basis Methodology for Reload Applications," or based on a plant-specific data approach.

Enclosure

8. NEDO-32465-A is a generic approved method for the DIVOM calculation, please provide a detailed description of the methodology for calculation of the plant-specific DIVOM correlation and identify the NRC-approved methodologies used to calculate the OPRM setpoints for TS 3.3.1.1.
9. Provide detailed results of the system tests to support the accuracy and operability of the current OPRM instrumentation. Describe the data bases obtained during the shutdown and subsequent startup from refueling outage since the OPRM system was installed.
10. According to the Boiling Water Reactors Owners' Group (BWROG) letter, BWROG-03049 dated September 30, 2003, "Utility Commitment to NRC for OPRM Operability at Option III Plants," a plant-specific DIVOM curve is recommended. Please identify any plant-specific differences from the generic values specified in NEDO-32465-A such as Period Based Detection Algorithm (PBDA) period confirmation setpoints in Table 3-1, PBDA trip setpoints in Table 3-2, and generic DIVOM curve slope. Also, provide plant-specific values for OPRM scram setpoints and the DIVOM correlation for the next cycle.
11. Please describe the alternate method to detect and suppress thermal hydraulic instability oscillations as stated in Condition I.1 of Actions under LCO 3.3.1.1.
12. Normally specific setpoint limits for OPRM are specified in the core operating limit report. Please justify that there are no setpoints for the trip function specified in proposed Surveillance for OPRM or note to the Table 3.3.1.1-1 under Function 2.f.

BROWNS FERRY NUCLEAR PLANT

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