

August 14, 2003

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

SUBJECT: REGULATORY FRAMEWORK FOR THE RESTART OF BROWNS FERRY  
NUCLEAR PLANT, UNIT 1 (TAC MB7679)

Dear Mr. Scalice:

Background

By letter dated December 13, 2002, as supplemented by letter dated February 28, 2003 (References 1 and 2, Accession Nos. ML023600026 and ML030620692, respectively), the Tennessee Valley Authority (TVA or the licensee) described its proposed regulatory framework for the restart of Browns Ferry Nuclear Plant (BFN), Unit 1. This proposed plan is similar to the one used for the restart of BFN Unit 3. It is based on the regulatory requirements, corrective actions, special programs, commitments, technical specification (TS) improvements, and TVA's internally identified deficiencies and concerns that were resolved prior to Units 2 and 3 restarts in 1991 and 1995, respectively.

On April 24, 2003, the U. S. Nuclear Regulatory Commission (NRC) and TVA staffs held a meeting to discuss TVA's proposed plan and the summary of that meeting was issued on May 13, 2003 (Reference 3, Package Accession No. ML031420394). TVA's letter of June 11, 2003 (Reference 4, Accession No. ML031630811), addressed the NRC staff's comments expressed during the meeting. This letter provides the NRC staff assessment of TVA's proposed plan. It should be noted that the implementation of this plan will be verified by NRC inspection prior to the restart of BFN Unit 1.

Restart Program Scope

TVA's plan, as described in References 1 and 2, includes programs and regulatory commitments (e.g., Generic Communications, Special Programs, Commitments, Operational Readiness, Communication Protocol, and TSs). TVA intends to complete these items prior to the restart of BFN Unit 1.

Reference 1 stated that many of the issues and programs identified in the enclosure had been previously reviewed and approved by the staff as part of BFN Unit 3 restart effort. However, as work progresses on BFN Unit 1, TVA or the staff may identify additional issues for which existing or new programs will need to be developed. Also, it is our understanding that TVA plans to handle these additional issues using, in general, existing NRC and TVA processes.

The NRC staff will continue its ongoing review of the outstanding programs, regulatory requirements, and applicable TVA commitments to ensure that they have been fully implemented prior to BFN Unit 1 restart in a manner consistent with NRC staff safety evaluations, and verified by NRC inspections. The staff's assessment of TVA's programs and regulatory commitments is provided in the following paragraphs.

### 1. Generic Communications

During the April 24, 2003, meeting, TVA provided additional information to support its position that its list of bulletins and generic letters (GLs) issued since 1985 is complete. In addition, TVA agreed to the following actions: (1) to address new generic communications in accordance with schedule requirements, (2) to provide written notification, within 90 days, of the completion of each generic communication that required time-specific notification, and (3) to adopt, for BFN Unit 1, the Electric Power Research Institute/BWR [Boiling water reactor] Vessel and Internals Project which was endorsed by the NRC, and to incorporate this guidance in the plant procedures that are applicable to all three units. The staff has reviewed the list of bulletins, GLs, and Three-Mile Island Action Items. Based on this review, the staff agrees that the list in Table 1 of Reference 1, as modified by Reference 2, is complete.

### 2. Special Programs

In Table 3 of Reference 1, TVA listed 27 special programs that are open, and agreed to notify NRC in writing upon completion of each special program. However, for the Unit 1 individual plant examination for external events (GL 88-20, Supplement 4), TVA will submit its analysis for NRC staff review and approval. Previously, the staff has concluded (References 5 and 6, Accession Nos. 9410040157 and 9905100107, respectively) that the individual plant examinations (IPEs) for Units 2 and 3 have met the intent of GL 88-20. However, a similar conclusion regarding Unit 1 IPE has not been reached. The NRC and TVA staffs will pursue this issue as a separate action.

TVA intends to implement the special programs in accordance with the Unit 3 implementation and design criteria precedents. Changes to design criteria will be addressed using the Title 10 *Code of the Federal Regulations* (10 CFR), Sections 50.59 and 50.90 processes. Deviations from implementation precedents will be made in accordance with TVA's internal processes. TVA will provide an annual summary of the changes to design criteria performed in accordance with 10 CFR 50.59 (the first one to be submitted in September 2003). For significant differences in modifications to Unit 1, as compared to Units 2 and 3, TVA agreed to provide a description of these modifications approximately 6 months prior to implementing them to support the NRC inspection planning.

The NRC staff has reviewed the list of special programs and TVA's proposed actions. Based on this review, the staff finds that the list is complete and TVA's proposed actions are acceptable.

### 3. Commitments

The licensee stated that its commitment management program is consistent with the Nuclear Energy Institute's guidance, NEI 99-04, "Guidelines for Managing Commitments," which was endorsed by the NRC Regulatory Issue Summary 00-17. TVA does not plan to notify NRC in

writing of the completion of each commitment; however, its processes would ensure that all the restart commitments are completed prior to restart. The NRC regional staff will provide the necessary oversight of the commitment completion. The NRC staff agrees with TVA's proposal that previous commitments that are not considered commitments under current regulatory guidance will be dispositioned or implemented using current processes at the BFN.

The staff has reviewed TVA's actions regarding commitments. Based on this review, the staff finds these actions acceptable.

#### 4. Operational Readiness

During the April 24, 2003, meeting, the licensee discussed its proposed actions that will ensure an adequate transition to a three-unit site. TVA's operational readiness plan is structured to consider the changes associated with operating such a site, in that, among other things, additional resources would be required. The BFN operators are licensed on all three units. TVA's operational readiness program consists of two primary elements: self assessments and independent reviews (e.g., Institute of Nuclear Power Operations and TVA's Nuclear Safety Review Board). The staff is in agreement with TVA's proposed actions.

#### 5. Communications

TVA proposed periodic meetings with the NRC staff on BFN Unit 1 project status and specific issues. The staff is in agreement with this proposal.

#### 6. Technical Specifications Changes

TVA provided, in Table 2 of Reference 1, a list of TS changes (about 25) made for Units 2 and 3 that have not been submitted for Unit 1. Only some of the items on the list constitute regulatory requirements, such as the Power Range Neutron Monitor Upgrade and the Safety Limit Minimum Critical Power Ratio. However, TVA is seeking approval of these items before the restart of BFN Unit 1 for operational flexibility and uniformity among all three units. In addition, the staff is aware that TVA may propose Unit 1 requests for relief from the American Society of Mechanical Engineers Code that have already been approved for Units 2 and 3. However, no preliminary list of these requests was provided. The staff requested and TVA agreed to provide sufficient lead time for the review and approval of the amendment and relief requests.

Recent TVA's applications for TS changes and relief requests have been made, to the extent possible, for all three units. Examples of these applications are the alternative source term, the Framatome fuel design and storage, the control room ventilation system, the scram discharge volume vent and drain valves, and the examination of weld overlays. The NRC staff will review these applications for all three units, and will appropriately evaluate and address any potential impacts on the Unit 1 restart. In addition, TVA plans to apply for extended power uprate license amendments for BFN Units 2 and 3 in the fall of 2003, and for Unit 1 in 2004; and for license renewal for all three units by December 2003.

The enclosure to Reference 1 discussed NRC License Condition 2.C.4 in License Amendment No. 234. This amendment promulgated the Improved TSs for BFN Unit 1. The license condition requires verification that the analyses and modifications needed to support changes to

Unit 1 Technical Specifications be complete, and be submitted for NRC review and approval prior to entering the mode for which the TS applies (emphasis added). These analyses consist of supporting the setpoint values included in Unit 1 Improved TSs. To meet this license condition, TVA proposed to submit a list of TS changes previously approved for all three BFN units for which Unit 1 specific analyses had not been completed at that time (e.g., 1998). If the assumptions and methodologies are different from what was used for Units 2 and 3, TVA will discuss the differences and provide a summary of the analyses results. This issue should be reviewed in detail to determine, among other things, if a revision to License Condition 2.C.4 is required. The NRC and TVA staffs will pursue this issue as a separate action.

#### Summary and Conclusion

With the exception of the IPE and the TS issues discussed above in Items 2 and 6, respectively, the staff is in agreement with TVA's commitments and actions regarding the regulatory framework for restart of BFN Unit 1. The NRC and TVA staffs will address these issues separately.

Based on the above, TVA agreed to provide the following documentation: (1) written notification, within 90 days, of the completion of each generic communication that requires time-specific notification, (2) written notification upon completion of each of the special programs, (3) an annual summary of changes to design criteria under 10 CFR 50.59 (the first to be submitted in September 2003), and (4) for significant differences in modifications to its special programs, TVA will provide in writing a description of these modifications approximately 6 months prior to implementing them to support the NRC inspection planning.

Please contact Mr. Kahtan N. Jabbour, the Browns Ferry Project Manager at 301-415-1496, if you have any comments regarding this matter.

Sincerely,

**/RA/**

Ledyard B. Marsh, Director  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

Docket No. 50-259

cc: See next page

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Please contact Mr. Kahtan N. Jabbour, the Browns Ferry Project Manager at 301-415-1496, if you have any comments regarding this matter.

Sincerely,

/RA/

Ledyard B. Marsh, Director  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

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Mr. J. A. Scalice  
Tennessee Valley Authority

**BROWNS FERRY NUCLEAR PLANT**

cc:

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

Mr. Mark J. Burzynski, Manager  
Nuclear Licensing  
Tennessee Valley Authority  
4X Blue Ridge  
1101 Market Street  
Chattanooga, TN 37402-2801

Mr. James E. Maddox, Vice President  
Engineering & Technical Services  
Tennessee Valley Authority  
6A Lookout Place  
1101 Market Street  
Chattanooga, TN 37402-2801

Mr. Timothy E. Abney, Manager  
Licensing and Industry Affairs  
Browns Ferry Nuclear Plant  
Tennessee Valley Authority  
P.O. Box 2000  
Decatur, AL 35609

Mr. Ashok S. Bhatnagar, Site Vice President  
Browns Ferry Nuclear Plant  
Tennessee Valley Authority  
P.O. Box 2000  
Decatur, AL 35609

Senior Resident Inspector  
U.S. Nuclear Regulatory Commission  
Browns Ferry Nuclear Plant  
P.O. Box 149  
Athens, AL 35611

General Counsel  
Tennessee Valley Authority  
ET 11A  
400 West Summit Hill Drive  
Knoxville, TN 37902

State Health Officer  
Alabama Dept. of Public Health  
RSA Tower - Administration  
Suite 1552  
P.O. Box 303017  
Montgomery, AL 36130-3017

Mr. Robert J. Adney, General Manager  
Nuclear Assurance  
Tennessee Valley Authority  
6A Lookout Place  
1101 Market Street  
Chattanooga, TN 37402-2801

Chairman  
Limestone County Commission  
310 West Washington Street  
Athens, AL 35611

Mr. Robert G. Jones, Plant Manager  
Browns Ferry Nuclear Plant  
Tennessee Valley Authority  
P.O. Box 2000  
Decatur, AL 35609