

June 15, 2010

Mr. Ashok S. Bhatnagar  
Senior Vice President  
Nuclear Generation Development  
and Construction  
Tennessee Valley Authority  
6A Lookout Place  
1101 Market Street  
Chattanooga, TN 37402-2801

SUBJECT: WATTS BAR NUCLEAR PLANT, UNIT 2 – REVIEW OF RADIOLOGICAL  
EMERGENCY RESPONSE PLAN (TAC NO. ME0853)

Dear Mr. Bhatnagar:

The purpose of this letter is to establish a process for an effective and efficient review of your Radiological Emergency Plan (REP) in support of the licensing of Watts Bar Nuclear Plant (WBN) Unit 2.

On February 12, 1993, you submitted Appendix C, Revision 0, to the Tennessee Valley Authority (TVA) Nuclear Power REP, Revision 15, and the WBN Implementing Procedures to the U.S. Nuclear Regulatory Commission (NRC) for review and approval. This REP, which includes the corporate-wide TVA REP and the site-specific WBN REP (Appendix C), constitutes the “emergency plan” as referred to in Sections 50.33(g), 50.34(b)(6)(v), 50.47, and Appendix E to Part 50 of Title 10 of the *Code of Federal Regulations* (10 CFR). In Supplement 13, dated April 1994, to NUREG 0847, “Safety Evaluation Report Related to the Operation of Watts Bar Nuclear Plant Units 1 and 2” (SER), the NRC staff approved the WBN REP. In Supplement 20, dated February 1996, to the SER, the staff stated that it reviewed the WBN REP through Revision 9, dated November 11, 1995, and the TVA REP, through Revision 26, dated December 4, 1995. Further, the staff stated that on the basis of its previous conclusions in Supplement 13 and its continued technical review, inspections, and exercise evaluations, the staff found the WBN REP acceptable for a full-power operating license. However, since construction and licensing activities were already suspended by this time, the review documented in Supplements 13 and 20 was performed only on the Unit 1 docket.

Since commencement of operation of Unit 1, you have made changes to your WBN REP as approved under 10 CFR 50.90 as well as pursuant to 10 CFR 50.54(q), which authorizes you to make changes to the emergency plans without prior NRC review and approval subject to certain conditions. The current version in use at WBN Unit 1 is Revision 91 of the TVA and WBN REP.

On August 3, 2007, you informed the NRC that you planned to resume construction and seek an operating license (OL) for WBN Unit 2. In this regard, on March 4, 2009, you submitted an updated OL application for WBN Unit 2. You indicated that upon receiving an OL for WBN Unit 2, you would use the WBN REP, approved for Unit 1, for both units as a site-wide plan.

Chapter 13.3 of the Standard Review Plan (SRP), NUREG-0800, addresses the situation, as at WBN, where a previously approved plan is being extended to an additional reactor on the same site. The SRP directs the staff to consider the existing plan acceptable and to focus its review on whether the plan reflects differences between the two units and addresses any dual-unit issues raised by the licensing of the additional unit. On March 4, 2009, you submitted a red-line version of Revision 88 of Appendix C, marked up with changes for WBN Unit 2. On December 3, 2009, you submitted a copy of Revision 89 of the TVA REP on the Unit 2 docket. The staff has been basing its review for Unit 2 on the redline version of Appendix C along with Revision 89 of the TVA REP. However, the current version in use at Unit 1 is Revision 91. In order to make its required findings regarding the acceptability of the WBN REP for Unit 2, the staff must be aware of changes being made to the WBN REP.

On March 11, 2010, the staff issued a request for additional information (RAI) on this and other issues. On April 27, 2010, you responded to the RAI and indicated that you would submit an updated Appendix C on August 6, 2010, and provide the NRC with updates of all changes made after the NRC review of the plan. This response does not address changes made to the corporate TVA REP, nor does it address changes that could occur during the period of the staff's review. This could lead to open and confirmatory issues in our SER because of the potential for changes that you could make to both the corporate TVA REP and site-specific WBN REP. The staff review of your current submittal of the plan will not be complete until (1) all open and confirmatory items related to the onsite plan are resolved, (2) the Federal Emergency Management Agency issues its final reasonable assurance determination following the qualifying exercise, and (3) the NRC issues the SER supplement documenting these reviews. Thus, any changes made by TVA after the staff approves the WBN emergency plan, but before Unit 2 licensing, could re-open the staff review. The staff believes that such a process would be an inefficient use of its resources and could affect our ability to complete our review of WBN Unit 2 OL application.

Thus, we request that TVA submits, on the Unit 2 docket, all revisions to Appendix C and to the corporate TVA REP made under the authority of 10 CFR 50.54(q), or any such changes approved by the NRC under 10 CFR 50.90. The staff review of these changes will focus on confirming that the changes made for Unit 1 do not affect the bases of the staff's review and findings for Unit 2. The staff also suggests that it would be prudent to minimize the occurrence

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of such changes to the extent possible while maintaining an effective emergency plan for Unit 1. These actions will enable the staff to complete its findings on the WBN REP that would be applicable for both Units 1 and 2.

If you should have any questions, please contact me at 301-415-1457.

Sincerely,

**/RA/**

Patrick D. Milano, Senior Project Manager  
Watts Bar Special Projects Branch  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Docket No. 50-391

Enclosure: RAI

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