



1101 Market Street, Chattanooga, Tennessee 37402

CNL-15-092

May 27, 2015

10 CFR 50.90

ATTN: Document Control Desk  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555-0001

Watts Bar Nuclear Plant, Unit 1  
Facility Operating License Nos. NFP-90  
NRC Docket No. 50-390

Subject: **Response to NRC Request to Supplement the Application to Revise Technical Specification 4.2.1, "Fuel Assemblies" (WBN-TS-15-03)**

- Reference:
1. Letter From TVA to NRC, "Application to Revise Technical Specification 4.2.1, 'Fuel Assemblies,' (WBN-TS-15-03)," dated March 31, 2015 (ADAMS Accession No. ML15098A446)
  2. Letter From NRC to TVA, "Watts Bar Nuclear Plant, Unit 1 - Supplemental Information Needed for Acceptance of Requested Licensing Action Regarding Application to Increase Tritium Producing Absorber Rods (TAC NO. MF6050)," dated May 14, 2015 (ADAMS Accession No. ML15127A250)

By letter dated March 31, 2015 (Reference 1), Tennessee Valley Authority (TVA) submitted a license amendment request (LAR) to revise Watts Bar Nuclear Plant (WBN), Unit 1 Technical Specification (TS) 4.2.1, "Fuel Assemblies," to increase the maximum number of Tritium Producing Burnable Absorber Rods (TPBARs) that can be irradiated per cycle from 704 to 1,792. The proposed change also revises TS 3.5.1, "Accumulators," Surveillance Requirement (SR) 3.5.1.4 and TS 3.5.4, "Refueling Water Storage Tank (RWST)," SR 3.5.4.3 to delete outdated information related to the Tritium Production Program.

By letter dated May 14, 2015, the Nuclear Regulatory Commission (NRC) requested that TVA provide additional information to supplement the LAR.

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The enclosure to this letter provides the requested human factors supplemental information. As stated in the Reference 2 letter, this supplement is due May 28, 2015. Supplemental information responses to Enclosures 2 and 3 of the Reference 2 letter will be provided in a separate TVA letter consistent with the requested due date of June 15, 2015.

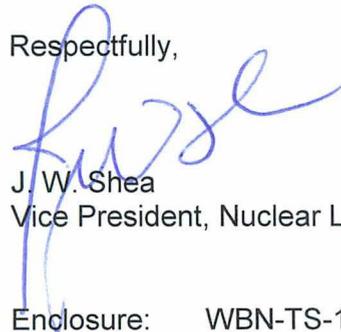
Consistent with the standards set forth in Title 10 of the *Code of Federal Regulations* (10 CFR), Part 50.92(c), TVA has determined that the additional information, as provided in this letter, does not affect the no significant hazards consideration associated with the proposed application previously provided in Reference 1.

Additionally, in accordance with 10 CFR 50.91(b)(1), TVA is sending a copy of this letter and the enclosures to the Tennessee Department of Environment and Conservation.

There are no new regulatory commitments associated with this submittal. Please address any questions regarding this request to Mr. Edward D. Schrull at (423) 751-3850.

I declare under penalty of perjury that the foregoing is true and correct. Executed on this 27th day of May 2015.

Respectfully,



J. W. Shea  
Vice President, Nuclear Licensing

Enclosure: WBN-TS-15-03 Supplemental Information

Enclosure  
cc (Enclosure):

NRC Regional Administrator - Region II  
NRC Resident Inspector – Watts Bar Nuclear Plant  
NRC Project Manager – Watts Bar Nuclear Plant  
Director, Division of Radiological Health - Tennessee State Department of  
Environment and Conservation

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CWS/EDS  
Enclosure  
bcc (Enclosure):

NSRB  
EDMS  
B. M. Duckett

bcc (w/o Enclosure 2):

G. P. Arent  
M. A. Balduzzi  
R. M. Bateman  
C. A. Borrelli  
G. A. Boerschig  
J. M. Casner  
C. R. Church  
S. M. Connors  
E. W. Cobey  
D. M. Czufin  
S. M. Douglas  
J. P. Grimes  
J. M. Keck  
M. W. McBrearty  
E. D. Schrull  
J. W. Shea  
M. D. Skaggs  
S. A. Vance  
K. T. Walsh  
B. A. Wetzel  
R. C. Williams  
ECM

## ENCLOSURE

### TENNESSEE VALLEY AUTHORITY WATTS BAR NUCLEAR PLANT UNIT 1

#### WBN-TS-15-03 Supplemental Information

*Information needed by the U.S. Nuclear Regulatory Commission staff to begin its review of the Tennessee Valley Authority's (TVA) request to increase tritium producing burnable absorber rods related to human factors considerations is described below.*

*On page E1-8 of 18 of TVA's March 31, 2015, submittal, TVA states:*

*In order to eliminate this unborated dilution source and the associated manual actions, TVA will replace the containment isolation thermal relief check valves on the lower compartment supply lines to the containment for WBN [Watts Bar Nuclear Plant], Unit 1 Component Cooling Water System and Essential Raw Cooling Water (ERCW) System with simple relief valves.*

- E1-1 Provide a list of the operator actions being eliminated, changed, or added in support of the license amendment request (LAR) (list the operator actions approved in Amendment No. 51 and indicate which ones are being eliminated or changed).*
- E1-2 Provide a list procedures that require revision in support of the LAR (number, title, and revision).*
- E1-3 Provide a list of any training required to support of the LAR.*
- E1-4 Identify any changes to the control room interface (displays, controls, alarms) resulting from this LAR.*
- E1-5 Identify any changes to the simulator required to support the LAR.*
- E1-6 Describe any required changes to the Safety Parameter Display System.*

#### TVA Response

The following Operator Manual Actions described in WBN, Unit 1 License Amendment 51 will be eliminated by the design change replacing the containment isolation thermal relief check valves on the lower compartment supply lines to the containment for WBN, Unit 1 Component Cooling Water System (CCS) and Essential Raw Cooling Water (ERCW) System with simple relief valves (i.e., passive devices).

1. Manual isolation of the six-inch ERCW supply to the lower containment cooler Group D from the main supply Header 1B by closing the safety-related valve 1-ISV-67-523B, which is located in the Auxiliary Building at elevation 692, within 16 hours after the postulated accident.

2. Manual isolation of the six-inch CCS supply and return lines for the reactor coolant pump oil cooler penetrating containment by closing safety-related valves 1-ISV-70-516 (supply) and 1-ISV-70-700 (return), as applicable within 16 hours of the accident, concurrent with the single failure of the outboard containment isolation valve to close.

WBN, Unit 1 License Amendment 51 also described other activities required to implement the above Operator Manual Actions. TVA anticipates that scaffolding to access ERCW supply valve 1-ISV-67-523B and the associated administrative controls will no longer be required following implementation of the design change described in the LAR. In addition, TVA anticipates that changes to Emergency Operating Instruction 1-E-0, "Reactor Trip of Safety Injection," Revision 5, to remove the above Operator Manual Actions and subsequent operator training on the deletion of the Operator Manual Actions will be required.

TVA anticipates that there will be no changes to the control room interface (displays, controls, alarms), simulator, and Safety Parameter Display System required to support the design change because the manual actions are performed remotely from the control room. However, the design change has not been finalized. Therefore, additional procedure changes and training needs may be identified as the design change progresses through the development and approval process.

TVA procedure NPG-SPP-09.3, "Plant Modifications and Engineering Change Control," provides requirements to manage the content, impact review, and implementation of design changes. These requirements provide assurance that the affected Disciplines and Departments review the change as it is developed for impact to items under their control, such as procedures, training, control room interfaces, and the simulator.