Tennessee Valley Authority, Post Office Box 2000, Spring City, Tennessee 37381-2000

October 11, 2007

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Mail Stop: OWFN P1-35
Washington, D.C. 20555-0001

In the Matter of) Docket No. 50-391
Tennessee Valley Authority)

WATTS BAR NUCLEAR PLANT (WBN) - UNIT 2 - EXEMPTIONS, RELIEFS, DEVIATIONS AND EXCEPTIONS

The purpose of this letter is to respond to a request made by the Nuclear Regulatory Commission Staff regarding WBN Unit 2 construction completion. Specifically, the Staff requested that TVA provide a list of exemptions, relief requests and other actions granted for WBN Unit 1 that would be required for WBN Unit 2 construction completion.

At this time, TVA does not see the need for additional exemptions or relief other than those discussed in the attachment to this letter and those associated with the WBN Unit 2 Preservice and Inservice inspection programs. TVA does plan to request the use of an ASME Code Case to administratively complete open N5 packages after the ASME Board approves the Code Case.

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Security and Emergency Planning are provided for by the operating unit, WBN Unit 1, and are not discussed further in this submittal.

The attachment to this letter provides a listing of the exemptions, ASME Code relief requests, deviations and exceptions in effect at the time of the WBN Unit 1 Operating License and their applicability to WBN Unit 2. For the most part, relief requests, deviations and exceptions were reviewed and approved for both units and incorporated into the Final Safety Analysis Report. As part of the completion of WBN Unit 2, additional implementation actions identified in the attachment will be tracked and verified complete. If TVA determines based on discovery or emerging issues that a request for exemption or code relief is appropriate, TVA will submit the request to the NRC for review and concurrence.

If you have any questions, please contact me at (423) 365-2351.

Sincerely,

M. Bajestani

Masoud Bajestani
Watts Bar Unit 2 Vice President

Attachment

(cc w/ Attachment):

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Attachment
WBN Unit 2 Exemptions, Code Relief,
Deviations and Exceptions

Attachment
WBN Unit 2 Exemptions, Code Relief,
Deviations and Exceptions

Exemption: 10 CFR 50 Appendix J Section III.D.2(b)(ii) for Airlock Leak Testing at pressure Pa before establishing containment integrity if air lock maintenance had been performed that could have affected the airlock sealing capability

Applicable to WBN Unit 2: No

Approved for WBN Unit 2: NA

Approval Reference: NA

Justification: NA

Other Actions: NA

Exemption: 10 CFR 70.24 for Criticality Monitoring

Applicable to WBN Unit 2: No

Approved for WBN Unit 2: NA

Approval Reference: NA

Justification: NA

Other Actions: NA

Exemption: 10 CFR 73.55 (c) (10) for surface vehicle bomb rule

Applicable to WBN Unit 2: No

Approved for WBN Unit 2: NA

Approval Reference: NA

Justification: NA

Other Actions: NA

Attachment
WBN Unit 2 Exemptions, Code Relief,
Deviations and Exceptions

Exemption: 10 CFR 73.55 related to returning contractor picture badges upon exit from the protected area

Applicable to WBN Unit 2: No

Approved for WBN Unit 2: NA

Approval Reference: NA

Justification: NA

Other Actions: NA

Exemption: 10 CFR 50 Appendix E for State participation in emergency planning exercise

Applicable to WBN Unit 2: No

Approved for WBN Unit 2: NA

Approval Reference: NA

Justification: NA

Other Actions: NA

Attachment
WBN Unit 2 Exemptions, Code Relief, Deviations and Exceptions

ASME Code Relief: ASME Code Section III, subsection NC/ND requirements concerning installation of block valves in safety/relief valve discharge lines

Applicable to WBN Unit 2: Yes

Approved for WBN Unit 2: Watts Bar Final Safety Analysis Report – Revision 91-Table 3.2-2a Note 8

Approval Reference: NRC letter dated February 22, 1993, "Watts Bar Nuclear Plant – Relief from Certain ASME Code Section III, Subsection NC/ND Requirements"

Justification: Manual block valves exist in the discharge piping of the relief valves that provide overpressure protection for the volume control tank, the boron injection tank and the waste gas compressors. The present arrangement allows isolation of either holdup tank for maintenance or removal of the holdup tank relief valve for testing and / or maintenance. Because this is a common system to both units, either holdup tank is available to support continuous operation when one valve is closed. With the present arrangement, there are administrative controls in place to ensure the locked open position of at least one valve and flow path at all times.

Other Actions: Additional WBN Unit 2 implementing procedure, and/or other activity required for completion.

ASME Code Relief: ASME Code Section III, subsection NB-2000 use of alternative acceptance for pipe fittings supplied by Tube-Line Corporation.

Applicable to WBN Unit 2: Yes

Approved for WBN Unit 2: Watts Bar Final Safety Analysis Report – Revision 91-Table 3.2-2a Note 4

Approval Reference: NRC letter dated September 23, 1991, "Watts Bar Nuclear Plant, Units 1 and 2 - Relief from ASME Code Section III, Subsection NB-2000"

Justification: The fittings are installed in the Essential Raw Cooling Water (ERCW) system. The ERCW system is a common system for both units and is in service to support WBN Unit 1 operation.

Other Actions: None

Attachment
WBN Unit 2 Exemptions, Code Relief,
Deviations and Exceptions

Deviation: Regulatory Guide 1.68 to not perform cold no-flow, cold full-flow and hot no-flow rod drop testing

Applicable to WBN Unit 2: Yes

Approved for WBN Unit 2: No

Approval Reference: NUREG 0847 Safety Evaluation Report related to the operation of Watts Bar Nuclear Plant Units 1 and 2, SER Supplement 5 (approved for Unit 1 only)

Justification: TVA does not intend to request a similar deviation for WBN Unit 2.

Other Actions: NA

Exceptions: Regulatory Guide 1.68

Applicable to WBN Unit 2: To be determined

Approved for WBN Unit 2: Watts Bar Final Safety Analysis Report – Revision 91 Chapter 14

Approval Reference: NUREG 0847 Safety Evaluation Report related to the operation of Watts Bar Nuclear Plant Units 1 and 2, SER Supplement 14

Justification: To be provided at a later date. TVA is in the process of developing the Initial Test Program for WBN Unit 2. As part of the process, TVA will evaluate the exceptions to RG 1.68 used for the Initial Test Program for WBN Unit 1 and determine those that remain valid.

Other Actions: Not applicable at this time.

Attachment
WBN Unit 2 Exemptions, Code Relief, Deviations and Exceptions

Deviation: Standard Review Plan 9.5.1 for use of Steam Generator saturation temperature T-sat instead of T-cold for assessing natural circulation in the auxiliary control room.

Applicable to WBN Unit 2: Yes

Approved for WBN Unit 2: Yes

Approval Reference: NUREG 0847 Safety Evaluation Report related to the operation of Watts Bar Nuclear Plant Units 1 and 2, SER Supplement 7

Justification: For operational fidelity between the units it is desirable that the instrumentation in the common auxiliary control room be the same for both WBN units.

Other Actions: Additional WBN Unit 2 implementing procedure, and/or other activity required for completion.

Exceptions: Regulatory Guide 1.97 Post Accident Monitoring

Applicable to WBN Unit 2: Yes

Approved for WBN Unit 2: Watts Bar Final Safety Analysis Report – Revision 91-Table 7.5-2

Approval Reference: Technical Evaluation report attached to NUREG 0847 Safety Evaluation Report related to the operation of Watts Bar Nuclear Plant Units 1 and 2, Supplemental SER 9

Justification: The exceptions to RG 1.97 are typically differences in instrument ranges or the category of instrumentation. For operational fidelity between the units it is desirable that the ranges of the instrumentation in the control rooms and the auxiliary control room be the same for both WBN units.

Other Actions: Additional WBN Unit 2 implementing procedure, and/or other activity required for completion.

Attachment
WBN Unit 2 Exemptions, Code Relief, Deviations and Exceptions

Deviation: NUREG-0737, Item II.F.2 guidance for Inadequate Core Cooling system for channel separation criteria inside the reactor cavity biological shield wall.

Applicable to WBN Unit 2: Yes

Approved for WBN Unit 2: Watts Bar Final Safety Analysis Report – Revision 91-7.7.1.9.1

Approval Reference: NUREG 0847 Safety Evaluation Report related to the operation of Watts Bar Nuclear Plant Units 1 and 2, SER Supplement 10

Justification: Design limitations of the core thermocouples within the reactor cavity do not allow for channel separation to satisfy RG 1.97 requirements. Exceptions to minimum separation requirements for the Reactor Vessel Level Instrumentation system exist at the instrumentation taps at the reactor vessel upper head and at the seal table. The exceptions to the design criteria have been evaluated and do not expose the system to additional risk.

Other Actions: None

Deviation: IEEE Standard 279 -1971 requirement that manual initiation be provided for each protective action at the system level.

Applicable to WBN Unit 2: Yes

Approved for WBN Unit 2: Watts Bar Final Safety Analysis Report – Revision 91-7.3.2.2.6

Approval Reference: NUREG 0847 Safety Evaluation Report related to the operation of Watts Bar Nuclear Plant Units 1 and 2, SER Supplement 14.

Justification: Manual initiation of both steamline isolation and switchover from injection to recirculation following a loss-of-primary-coolant accident are performed at the component level only. For operational fidelity between the units it is desirable that the operator actions required following an accident be the same for both WBN units.

Other Actions: Additional WBN Unit 2 implementing procedure, and/or other activity required for completion.

Attachment
WBN Unit 2 Exemptions, Code Relief,
Deviations and Exceptions

Deviation: Regulatory Guide 1.118, Periodic Testing of Electric Power and Protection Systems to use jumpers on a limited basis for testing of Eagle-21 equipment and testing of electric power systems.

Applicable to WBN Unit 2: Yes

Approved for WBN Unit 2: Watts Bar Final Safety Analysis Report – Revision 91-Table 7.1-1

Approval Reference: NUREG 0847 Safety Evaluation Report related to the operation of Watts Bar Nuclear Plant Units 1 and 2, SER Supplement 16.

Justification: Where feasible test switches or other necessary equipment will be installed permanently to minimize the use of temporary jumpers in testing.

Other Actions: Additional WBN Unit 2 implementing procedure, and/or other activity required for completion.

Deviation: Regulatory Guide 1.75, Physical Independence of Electrical Systems pertaining to electrical separation for divisional open cable trays (including cable in free air) and conduits.

Applicable to WBN Unit 2: Yes

Approved for WBN Unit 2: Watts Bar Final Safety Analysis Report – Revision 91-Table 7.1-1

Approval Reference: NUREG 0847 Safety Evaluation Report related to the operation of Watts Bar Nuclear Plant Units 1 and 2, SER Supplement 16

Justification: RG 1.75 was issued after the Watts Bar design was completed. Separation criteria for WBN Units 1 and 2 are given in FSAR section 8.3.1.4.2. Electric cable trays, wireways and conduit were installed using this criterion.

Other Actions: Additional WBN Unit 2 implementing procedure, and/or other activity required for completion.

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WBN Unit 2 Exemptions, Code Relief,
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Deviations: Staff Fire Protection Guidance in the following areas:

- Required instrumentation for Alternative Shutdown
- Noncombustible Radiant Energy Heat Shields
- Intervening Combustibles
- Partial Firewall between Component Cooling Water System Pumps
- Openings in Fire Barriers
- Emergency Lighting
- Lack of Total Area Suppression and Detection
- Deviations to BTP 9.5-1 Appendix A

Applicable to WBN Unit 2: Yes

Approved for WBN Unit 2: Yes

Approval Reference: NUREG 0847 Safety Evaluation Report related to the operation of Watts Bar Nuclear Plant Units 1 and 2, SER Supplement 18 and 19.

Justification: WBN Unit 2 was designed and constructed to be identical to WBN Unit 1. The deviations were reviewed for both units and evaluated to be acceptable.

Other Actions: Additional WBN Unit 2 implementing procedure, and/or other activity required for completion.

Alternate acceptance: Visual Examination during ASME Section III hydrostatic pressure testing for penetrations having inaccessible vendor welds

Applicable to WBN Unit 2: Yes

Approved for WBN Unit 2: No

Approval Reference: NRC Inspection Report 50-390/391-90-04 dated May 17, 1990 (Approval for Unit 1)

Justification: TVA intends to request a similar alternate acceptance for WBN Unit 2.

Other Actions: Not applicable at this time

Attachment
WBN Unit 2 Exemptions, Code Relief, Deviations and Exceptions

Alternate acceptance: Criteria for the pneumatic test for the Control Air System.

Applicable to WBN Unit 2: No

Approved for WBN Unit 2: NA

Approval Reference: NA

Justification: NA

Other Actions: NA

Alternate acceptance: Criteria for the welds on the drain line vortex for the Refueling Water Storage Tanks.

Applicable to WBN Unit 2: Yes

Approved for WBN Unit 2: Watts Bar Final Safety Analysis Report – Revision 91-9.2.7

Approval Reference: NRC Inspection Report 50-390/391-90-04 dated May 17, 1990

Justification: The WBN Unit 2 Refueling Water Storage Tank is installed and the welds on the drain line vortex are inaccessible for radiography.

Other Actions: None

Alternate acceptance: Criteria for material procured prior to the initiation of the Acceptable Suppliers List (approximately May 1978)

Applicable to WBN Unit 2: Yes

Approved for WBN Unit 2: Watts Bar Final Safety Analysis Report – Revision 91-3.2.3.2

Approval Reference: NRC Inspection Report 50-390/391-90-02 dated March 15, 1990

Justification: Material procured prior to the initiation of the Acceptable Suppliers List is acceptable for use assuming all other attributes of the material and the documentation conform to ASME Code requirements.

Other Actions: Additional WBN Unit 2 implementing procedure, and/or other activity required for completion.