



Tennessee Valley Authority, 1101 Market Street, Chattanooga, Tennessee 37402

CNL-15-131

July 15, 2015

10 CFR 50.54(f)

ATTN: Document Control Desk
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555-001

Watts Bar Nuclear Plant, Unit 2
Construction Permit No. CPPR-92
NRC Docket No. 50-391

Subject: **WATTS BAR NUCLEAR PLANT UNIT 2 - INDIVIDUAL PLANT
EXAMINATION OF EXTERNAL EVENTS (IPEEE) REPORT, REVISION 3**

Reference: Letter from TVA to NRC, "Watts Bar Nuclear Plant Unit 2 - Individual Plant
Examination of External Events Final Report", dated March 20, 2015

The purpose of this letter is to provide Revision 3 of the Watts Bar Nuclear Plant (WBN) Unit 2, Individual Plant Examination of External Events (IPEEE) Report. Revision 2 of the IPEEE Report was previously submitted in the referenced letter. Revision 3 impacts three pages (i.e., page 1 - cover page, page 29 - Table 2-3, and page 48 - references).

The Tennessee Valley Authority (TVA) recently revised calculation CDQ0009992012000125, "Updated WBN Seismic IPEEE HCLPF Capacity," to establish a High Confidence Low Probability of Failure (HCLPF) capacity of at least 0.50g, consistent with IPEEE implementation requirements for a 0.50g Review Level Earthquake plant. The calculation revision specifically involved a reassessment of the seismic margin for the Refueling Water Storage Tank. The revised page 29 included in Enclosure 1 reflects the new HCLPF value for the Refueling Water Storage Tank.

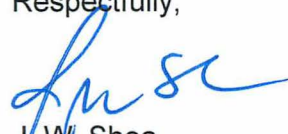
In the process of revising the report to reflect the new Refueling Water Storage Tank value, TVA identified several other values on page 29 of the report that needed to be updated to reflect previous changes to HCLPF capacities for other plant components. Due to an oversight, the other values were not updated when Revision 2 of the report was submitted on March 20, 2015. The WBN Unit 2 HCLPF seismic capacity remains above 0.50g.

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Enclosure 1 provides the revised pages. Enclosure 2 provides the filing instructions to update the Revision 2 document previously provided in the above reference.

There are no new regulatory commitments made in this letter. Should you have questions regarding this submittal, please contact Gordon Arent at (423) 365-2004.

Respectfully,



J. W. Shea
Vice President, Nuclear Licensing

Enclosures:

1. Watts Bar Nuclear Plant, Unit 2 - Individual Plant Examination of External Events, Final Report, Revision 3
2. Filing Instructions

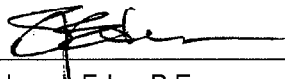

cc (Enclosures):


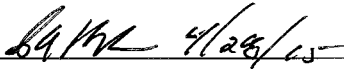

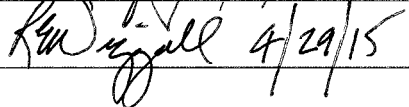
U.S. Nuclear Regulatory Commission, Region II
NRC Project Manager - Watts Bar Nuclear Plant, Unit 2
NRC Senior Resident Inspector - Watts Bar Nuclear Plant, Unit 2

Enclosure 1
Watts Bar Nuclear Plant, Unit 2 - Individual Plant Examination of External Events,
Final Report, Revision 3

Watts Bar Nuclear Plant Unit 2 (WBN2)
Individual Plant Examination of External Events (IPEEE)

Final Report

Preparer:  Reviewer: 
 Stephen J. Eder, P.E. Richard D. Cutsinger, P.E.

Management Review			
Civil:	 4/23/15	Electrical:	 4/23/15
Mechanical:	 4/27/15	NSSS:	n/a
Approved:	 4/29/15		

Revision 3
 April 16, 2015

Table 2-3: WBN2 Updated HCLPF Seismic Capacities

(Reference [19])

Description	HCLPF Capacity	Key Considerations
6900V Shutdown Boards	0.57g	<ul style="list-style-type: none"> Seismic demand based on ACB median centered response spectra
480V Shutdown Board Transformers (Modified)	0.85g	<ul style="list-style-type: none"> Seismic demand based on ACB median centered response spectra Governed by base attachment bolts which are readily accessible. These were changed out to higher strength bolts eliminated anchorage as a weak link and significantly increased HCLPF capacity, now governed by the tested functional capacity.
CCS Heat Exchangers	0.58g	<ul style="list-style-type: none"> Seismic demand based on ACB median centered response spectra Actual piping nozzle loads used
ERCW Pumps	1.27g	<ul style="list-style-type: none"> WBN IPS Screen Wash Pump configuration specifically evaluated (not scaled from SQN) Actual piping nozzle loads were used.
IPS Screen Wash Pumps	0.80g	<ul style="list-style-type: none"> WBN IPS Screen Wash Pump configuration specifically evaluated (not scaled from SQN) Actual piping nozzle loads used.
480V RMOV Boards	0.69g	<ul style="list-style-type: none"> Seismic demand based on ACB median centered response spectra
480V Reactor Vent Boards	0.75g	<ul style="list-style-type: none"> Seismic demand based on ACB median centered response spectra
480V Control & Aux. Boards	0.89g	<ul style="list-style-type: none"> Seismic demand based on ACB median centered response spectra
RWST	0.61g	<ul style="list-style-type: none"> WBN RWST configuration specifically evaluated including thicker tank shell, larger anchor bolts, and shear keys
Block Walls	0.53g	<ul style="list-style-type: none"> No change from WBN1 evaluation (Reference [4]).
Main Control Room Ceiling	0.52g	<ul style="list-style-type: none"> Based on non-linear analysis results and scaled B+C ARS for the ACB.

14. Watts Bar Design Criteria Document No. WB-DC-20-32, "Integrated Interaction Program Screening and Acceptance Criteria," Revision 05.
15. Tennessee Valley Authority Design Criteria No. WB-DC-40-31.2, "Seismic/Structural Qualification of Seismic Category I Electrical and Mechanical Equipment," Revision 11, April 2009.
16. United States Nuclear Regulatory Commission, Generic Letter No. 88-20, Supplement 5 dated September 8, 1995, "Individual Plant Examination of External Events (IPEEE) for Severe Accident Vulnerabilities."
17. Tennessee Valley Authority Letter to NRC dated December 5, 2000, "Sequoyah Nuclear Plant (SQN) - Units 1 and 2 - Response to Request for Additional Information on the Individual Plant Examination of External Events (IPEEE) (TAC nos. M83674 and M83675)," RIMS No. S64 001205 802.
18. United States Nuclear Regulatory Commission Letter to TVA dated February 21, 2001, "Sequoyah Nuclear Plant, Units 1 and 2 - Review of Sequoyah Individual Plant Examination of External Events Submittal (TAC Nos. M83674 and M83675)."
19. Tennessee Valley Authority Calculation No. CDQ 000 999 2012 000125, "Updated WBN Seismic IPEEE HCLPF Capacity," Rev 02.
20. United States Nuclear Regulatory Commission Letter to TVA dated February 3, 2012, "Watts Bar Nuclear Plant Unit 2 Construction - NRC Integrated Inspection Report 05000391/2011610."
21. Seismic Qualification Utility Group (SQUG), "Generic Implementation Procedure (GIP) for Seismic Verification of Nuclear Plant Equipment," Revision 3A, December 2001.
22. Tennessee Valley Authority Calculation No. CDQ 000 999 2014 000619, "WBN2 Seismic IPEEE Walkdown Screening Evaluations," Rev 0.
23. Tennessee Valley Authority Design Criteria No. WB-DC-40-31.12, "Seismic/Structural Qualification of Seismic Category I and I(L) In-Line Valves and Other In-Line Fluid System Components," Rev. 11.
24. Tennessee Valley Authority, "Updated Final Safety Analysis Report," Amendment 7, Submitted to the NRC September 2008.
25. Tennessee Valley Authority Calculation No. WCG-2-617, "Seismic Margin Assessment of Main Control Room Ceiling," Revision 0, March 2010.
26. U.S. Nuclear Regulatory Commission (NRC), NUREG/CR-0098, "Development of Criteria for Seismic Review of Selected Nuclear Power Plants," N.M. Newmark and W. J. Hall, May 1978.
27. United States Nuclear Regulatory Commission, Regulatory Guide 1.59, "Design Basis Floods for Nuclear Power Plants," Revision 2, August 1977.

Enclosure 2
Filing Instructions

Update Individual Plant Examination of External Events (IPEEE) Report, Revision 2 to Revision 3 by performing the following:		
Revision 2	to	Revision 3
Remove Cover Page 1		Replace with Cover Page 1
Remove Page 29 - Table 2-3		Replace with Page 29 - Table 2-3
Remove Page 48 - References		Replace with Page 48 - References