



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

May 28, 2014

LICENSEE: Tennessee Valley Authority

FACILITY: Watts Bar Nuclear Power Plant, Unit 1

SUBJECT: SUMMARY OF JANUARY 28, 2014, MEETING WITH TENNESSEE VALLEY  
AUTHORITY REGARDING WATTS BAR NUCLEAR PLANT, UNIT 2, OPEN  
ITEMS FOR LICENSING

On January 28, 2014, a Category 1 public meeting was held between the U.S. Nuclear Regulatory Commission (NRC) and representatives of the Tennessee Valley Authority (TVA) at NRC Headquarters, One White Flint North, 11555 Rockville Pike, Rockville, Maryland. The purpose of this meeting was for TVA to discuss with NRC outstanding open items related to the licensing effort for the Watts Bar Nuclear Plant (WBN), Unit 2.

During the first portion of the meeting TVA discussed a draft request for additional information (RAI) from NRC staff regarding the Draft Offsite Dose Calculation Manual (ODCM) for WBN. The draft ODCM is available in the Agencywide Documents Access and Management (ADAMS) at Accession No. ML12311A151. The draft RAI is available at ADAMS Accession No. ML14030A109. TVA asked clarifying questions on the RAIs numbered 6, 16, and 21. Following the discussion, TVA stated they understood the intent of the RAIs and would respond accordingly.

The NRC and TVA staff then discussed the status of each of the electrical open items documented in supplements to NUREG-0847 "Safety Evaluation Report Related to the Operation of Watts Bar Nuclear Plant, Unit 2," as presented in Enclosure 2. The main focus was on open item no. 30 related to degraded voltage issues. TVA stated that they believe they addressed this issue already and that if the NRC staff doesn't agree with TVA's approach that the NRC needs to formally document this in an RAI so that they could find a path to resolution. In the meeting, the NRC staff agreed to review TVA's last submittal attempting to resolve this issue and would issue RAIs if required. Subsequent to the meeting the staff issued an RAI on February 27, 2014 (ADAMS Accession No. ML14059A158).

In addition to the open items documented in NUREG-0847 (of which the latest version is Supplement 26 and available in ADAMS at Accession No. ML13205A136), TVA and the NRC staff discussed Bulletin 2012-01 "Design Vulnerability in Electric Power System" (ADAMS Accession No. ML12074A115) and TVA's response for WBN Unit 2. The NRC staff stated that they were reviewing TVA's response, as well as those from the rest of the industry, and believed that additional information would be needed to resolve the issue for WBN Unit 2. Subsequent to the meeting the staff issued an RAI related to the open phase issue on February 27, 2014 (ADAMS Accession No. ML14059A158).

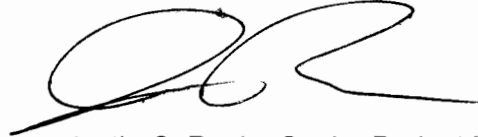
The NRC licensing project managers reiterated that the NRC is collectively supporting making an operating license decision in early 2015. To support this schedule, TVA needs to provide the appropriate information to facilitate the staff completing its review by summer of 2014.

The NRC electrical engineering staff mentioned that their technical review resources were limited but they were willing to support the overall project schedule.

No regulatory decisions were made at the meeting. Two members of the public joined the meeting by teleconference. Questions from the public addressed the location of radiation monitoring and the availability of the real-time radiation monitoring data. The NRC addressed the questions and noted that although the real time data is not directly available to the public the NRC performs routine inspections and publishes annual reports on radiation monitoring that are publicly available. Members of the public asked about TVA's authority to close the rivers surrounding WBN. The NRC staff noted that TVA could close the river in a flooding scenario and in case of a site emergency where the public would need to be protected.

A member of the public asked the NRC to provide high level milestones and due dates related to the licensing effort for WBN Unit 2. The staff agreed to provide the information and to make updates reflecting the current licensing schedule to the public WBN Unit 2 website; <http://www.nrc.gov/info-finder/reactor/wb/watts-bar.html>. An updated timeline with high level milestones is available at <http://www.nrc.gov/info-finder/reactor/wb/watts-bar/wb2-timeline.pdf>. No Public Meeting Feedback forms were received.

Please direct any inquiries to me at 301-415-2048 or via e-mail at [Justin.Poole@nrc.gov](mailto:Justin.Poole@nrc.gov)



Justin C. Poole, Senior Project Manager  
Watts Bar Special Projects Branch  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Docket No. 50-391

Enclosures:

1. List of Attendees
2. Table of Open Electrical Engineer Action Items

cc w/encls: Distribution via Listserv

### MEETING ATTENDANCE LIST

**Licensee:** Tennessee Valley Authority

**Plant:** Watts Bar Nuclear Plant, Unit 2

**Subject:** ODCM and Electrical Open Items

**Date:** January 28, 2014

**Location:** U.S. Nuclear Regulatory Commission  
Headquarters, Room O-7B4

**Time:** 2:30 p.m. – 4:00 p.m.

NAME	TITLE	ORGANIZATION
John Monninger	Deputy Division Director	NRC/NRR/DORL
Justin Poole	Sr. Project Manager	NRC/NRR/DORL/Plant Licensing Branch II-2
Andy Hon	Project Manager	NRC/NRR/DORL/Plant Licensing Branch II-2
Jeanne Dion	Project Manager	NRC/NRR/DORL/Plant Licensing Branch II-2
Roger Pedersen	Sr. Health Physicist	NRC/NRR/DRA
Jake Zimmerman	Chief, Electrical Engineering Branch	NRC/NRR/DE/EEEB
Roy Mathew	Team Leader	NRC/NRR/DE/EEEB
Bill Crouch	Mechanical/Nuclear Engineering Manager	TVA/WBN2
Steven Hilmes	Electrical/I&C Engineering Manager	TVA/WBN2
Bob Bryan	Licensing	TVA

NAME	TITLE	ORGANIZATION
Gordon Arent	TVA Director, WBN Licensing	TVA
Gary Morgan	Member of Public	
Sara B	Member of Public	Southern Alliance for Clean Energy

### WATTS BAR UNIT 2 ACTION ITEMS TABLE

This table provides a status of required action items associated of all open items, confirmatory issues, and proposed license conditions that the staff has identified.

CI – Confirmatory Issue

<u>Item</u>	<u>Type</u>	<u>Action Required</u>	<u>NRC Lead</u>	<u>TVA Response Required/ TVA Lead</u>	<u>TVA Action Required to Close</u>	<u>NRC Action Required to Close</u>	<u>Due Date</u>	<u>S S E R</u>
(1)	CI	Review evaluations and corrective actions associated with a power assisted cable pull. (NRC safety evaluation dated August 31, 2009, ADAMS Accession No. ML092151155)	EEEB	Yes/ ELE	EC:1/17/14 FC: TVA to provide letter to NRR documenting any power assisted cable pulls if performed. NRR and/or RII to review calculations on any power assisted cable pulls. Results documented in inspection report. Letter from TVA if no power assisted cable pulls were done. NRR Calculation Review Addressed by Maximo Commitment Closure package 10181059	TVA to provide letter to NRR documenting any power assisted cable pulls if performed. NRR and/or RII to review calculations on any power assisted cable pulls. Results documented in inspection report. Letter from TVA if no power assisted cable pulls were done.		28
(7)	CI	Verify commitment completion and review electrical design calculations. (TVA letter dated October 9, 1990, ADAMS Accession No. ML073551056)	RII	No/ Elec	EC: Ongoing FC: N/A For NRC Inspection / Review See commitments in TVA Letter. Provide Guillermo Crespo a copy of related electrical calculation procedures and provide NRC access to calculations	Include in inspection planning and conduct inspection. Reference closure in IR and SER. Specific actions need to be clarified with EEEB.		27

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(16)		Based on the uniqueness of EQ, the NRC staff must perform a detailed inspection and evaluation prior to fuel load to determine how the WBN Unit 2 EQ program complies with the requirements of 10 CFR 50.49. (SSER 22, Section 3.11.2, pg 3-12/13)	RII/ EEEB	No/ ELE	EC: Ongoing Inspection FC: N/A  For NRC Inspection / Review Provide NRC Lisa Castelli copies of EQ documents as requested for the onsite inspections.	Conduct EQ inspection. Document in IR and update status in Appendix HH.		27
(17)		The NRC staff should verify the accuracy of the WBN Unit 2 EQ list prior to fuel load. (SSER 22, Section 3.11.2.1, pg 3-13)	RII/ EEEB	No/ ELE	EC: Ongoing Inspection FC: N/A  For NRC Inspection/Review: provide NRC Lisa Castelli copies of EQ documents as requested for the onsite inspections.	Conduct EQ inspection. Document in IR and update status in Appendix HH.		27
(23)		Resolve whether or not TVA's reasoning for not upgrading the MSIV solenoid valves to Category I is a sound reason to the contrary, as specified in 10 CFR 50.49(l). (SSER 22, Section 3.11.2.2.1, pg 3-15)	EEEB	Yes/ ELE	EC: Complete FC: N/A Response provided in TVA to NRC letter dated April 6, 2011.	NRR reviewing the April 6, 2011 response. TVA stated that the MSIV solenoids would be upgraded to Cat I. TVA to provide letter to close out commitment from 4/6/11 letter.		27
(26)		For the scenario with an accident in one unit and concurrent shutdown of the second unit without offsite power, TVA stated that Unit 2 pre-operational testing will validate the diesel response to sequencing of loads on the Unit 2 emergency diesel generators (EDGs). The NRC staff will evaluate the status of	EEEB	Yes	EC: Complete FC: N/A Response provided in TVA to NRC letter dated April 6, 2011. Updated response on June 7, 2012.	TVA provided information in April 6, 2011 letter. Additional RAIs were sent to TVA on 11/18/2011. NRR tech staff review and document in SER. This item was also partially reviewed during EDSFI. EEEB to review results of IDVP and EDSFI reports for impact in this area.		27

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		this issue and will update the status of the EDG load response in a future SSER. (SSER 22, Section 8.1)						
(30)		TVA should confirm that all other safety-related equipment (in addition to the Class 1E motors) will have adequate starting and running voltage at the most limiting safety related components (such as motor operated valves, contactors, solenoid valves or relays) at the degraded voltage relay setpoint dropout setting. TVA should also confirm that the final Technical Specifications are properly derived from these analytical values for the degraded voltage settings. (SSER 22, Section 8.3.1.2, pg 8-10)	RII/ EEEB	NO/ ELE	EC: Complete FC: N/A Submitted letter 8/12/11. Updated response on June 7, 2012.	TVA submitted letter dated August 12, 2011 and update on June 7, 2012. NRR tech staff review and document in SER.		27
(32)		TVA should provide to the NRC staff the details of the administrative limits of EDG voltage and speed range, and the basis for its conclusion that the impact is negligible, and describe how it accounts for the administrative limits in the Technical Specification surveillance requirements for EDG voltage and frequency. (SSER 22, Section 8.3.1.14, pg 8-14)	EEEB	Yes/ ELE	Due date: June 2013 (Hilmes) FC: N/A  Tech Spec review is with Corporate Licensing (Joe Shea). Provide response for submittal to NRR. Note – NRC RII may have an issue with the actual DG loading.	TVA to provide information on EDG admin limits. NRR tech staff review and document in SER. TVA to submit amendment to TSs for Unit 2. (FYI we decided to submit on U2 first)		27

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(33)	CI	TVA stated in Attachment 9 of its letter dated July 31, 2010, that certain design change notices (DCNs) are required or anticipated for completion of WBN Unit 2, and that these DCNs were unverified assumptions used in its analysis of the 125 V dc vital battery system. Verification of completion of these DCNs to the NRC staff is necessary prior to issuance of the operating license. (SSER 22, Section 8.3.2.3, pg 8-16)	RII/ EEEB	Yes/	EC: Complete FC: Response provided in TVA to NRC letter dated April 6, 20	TVA provided information in April 6, 2011 letter. TVA to notify RII when work completed. RII to verify completion of DCNs and include in IR. Update status in Appendix HH.		27



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JDion, NRR		

**ADAMS Accession No. PKG ML14132A283**

**Meeting Notice - ML14015A452 Meeting Summary - ML14091A272 Handouts - ML14030A109**

OFFICE	DORL/LPWB/PMIT	DORL/LPLWB/PM	DORL/LPWB/LA	NRR/DE/EEEB	DORL/LPWB/BC	DORL/LPWB/PM
NAME	JDion	JPoole	BClayton	JZimmerman	JQuichocho	JPoole
DATE	5/13/14	5/13/14	5/13/14	5/20/14	5/27/14	5/28/14