



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

December 23, 2015

APPLICANT: Tennessee Valley Authority

FACILITY: Watts Bar Nuclear Power Plant, Units 1 and 2

SUBJECT: SUMMARY OF NOVEMBER 19, 2015, MEETING WITH TENNESSEE VALLEY  
AUTHORITY REGARDING WATTS BAR NUCLEAR PLANT UNITS 1 AND 2  
LICENSE AMENDMENT REQUESTS

On November 19, 2015, a Category 1 public meeting was held between the U.S. Nuclear Regulatory Commission (NRC) and representatives of the Tennessee Valley Authority (TVA). The purpose of this meeting was for TVA staff to present information regarding pending license amendment requests to propose changes to Watts Bar Nuclear Plant (WBN) technical specification (TS) requirements. The proposed changes would extend diesel generator (DG) allowed outage times (AOT) for both WBN units, and revise ice condenser door surveillance requirements for WBN Unit 2. A list of attendees for the meeting is included in Enclosure 1.

Representatives from TVA first discussed the pending request to extend the AOT for the DGs from 72 hours to 14 days. The presentation is available in the Agencywide Documents Access and Management System (ADAMS) under Accession No. ML15324A442. The TVA representatives described historical changes to the AOT for Unit 1, provided an overview of the plant electrical systems, described the need for the proposed change, described the proposed changes to the TSs, discussed the regulatory guidance relied on to develop the proposal, and described several ancillary TS and Bases changes that will be included in the submittal. The principle reason for the change is to provide sufficient time to perform routine DG surveillance testing and maintenance without requiring a dual-unit shutdown due to the extended inoperability of one of the shared DGs due to maintenance activities. The proposed change will conform to the guidance of NRC Branch Technical Position (BTP) 8-8, "Onsite and Offsite Power Sources AOT Extensions." BTP 8-8 states that a supplemental power source should be available as a backup to the inoperable DG during the extended outage. The TVA submittal will propose to rely on the FLEX DGs installed in response to the Mitigating Strategies Order (EA-12-049, ADAMS Accession Package No. ML12054A736) as the supplemental power source.

The NRC staff posed several questions and made several observations about the proposed amendment. The staff emphasized that the proposed extension needs to be adequately justified, including the specification of detailed maintenance timelines to support the requested extension interval. The staff requested information on how the availability of the FLEX DG would be assured during the maintenance activity; and how an unavailable FLEX DG or reliance on the FLEX DG during the maintenance interval might challenge FLEX strategies. TVA representatives indicated that this would be addressed in the submittal. The staff also requested information about whether TVA had considered the staff position provided in Regulatory Issue Summary (RIS) 2008-15, "NRC Staff Position on Crediting Mitigating

Strategies Implemented in Response to Security Orders in Risk-Informed Licensing Actions and in the Significance Determination Process” (June 25, 2008; ADAMS Accession No. ML080630025), in choosing the amount of probabilistic risk assessment credit provided to FLEX strategies in TVA’s quantifications. TVA representatives stated that they were cognizant of the staff positions in the RIS and that the analyses were consistent with those in crediting the FLEX equipment.

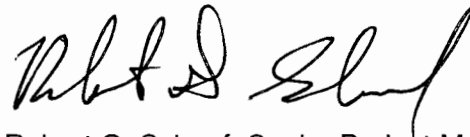
TVA representatives stated that the first need for the extended AOT would be a scheduled DG maintenance outage in the spring of 2016. The NRC staff indicated that meeting this schedule would likely be challenging, and recommended that TVA consider alternative maintenance or licensing strategies for the spring 2016 maintenance activity.

The TVA representatives then provided an overview of the pending request to revise the interval for first-year TS surveillance requirements for the Unit 2 containment ice condenser lower inlet doors. The presentation is available in ADAMS under Accession No. ML15324A443. The TVA representatives provided an overview of the ice condenser design, the proposed TS changes, and described the history of industry surveillance test performance failures. The proposed change would permit operation through the summer months without requiring a plant shutdown merely for the purpose of conducting the door surveillances. A handout provided by TVA listing the reported surveillance testing failure history is provided in Enclosure 2.

The NRC staff questioned whether the proposed surveillance requirement could result in a greater than intended interval between first-year surveillance tests under certain circumstances. The staff discussed with the TVA representatives potential alternatives to address the staff’s concern, such as the inclusion of a note to limit the total time interval permitted between surveillance tests, and/or to perform tests in the event of an unplanned shutdown of the plant.

No members of the public were in attendance and no Public Meeting Feedback forms were received. No regulatory decisions were made at this meeting.

Please direct any inquiries to me at 301-415-6020 or via e-mail at [Robert.Schaaf@nrc.gov](mailto:Robert.Schaaf@nrc.gov)

A handwritten signature in black ink, appearing to read "Robert G. Schaaf". The signature is fluid and cursive, with the first name "Robert" being the most prominent.

Robert G. Schaaf, Senior Project Manager  
Plant Licensing Branch 2-2  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Docket Nos. 50-390 and 50-391

Enclosures:

1. List of Attendees
2. TVA Handout on Industry Surveillance Test History

cc w/encls: Distribution via Listserv

### MEETING ATTENDANCE LIST

**Applicant:** Tennessee Valley Authority

**Plant:** Watts Bar Nuclear Plant,  
Units 1 and 2

**Subject:** Pending License Amendment Requests

**Date:** November 19, 2015

**Location:** U.S. Nuclear Regulatory Commission  
Headquarters, Room O-16B04

**Time:** 9:30 p.m. – 11:30 p.m.

NAME	TITLE	ORGANIZATION
James Trapp	Deputy Director (Acting)	NRC/NRR/DORL (Division of Operating Reactor Licensing)
Ben Beasley	Branch Chief	NRC/NRR/DORL/LPLII-2 (Plant Licensing Branch II-2)
Robert Schaaf	Senior Project Manager	NRC/NRR/DORL/LPLII-2
Andrew Hon	Senior Project Manager	NRC/NRR/DORL/LPLII-2
Margaret Chernoff	Senior Reactor Systems Engineer	NRC/NRR/DSS/STSB (Division of Safety Systems, Technical Specifications Branch)
Stewart Bailey	Branch Chief	NRC/NRR/JLD/JERB (Japan Lessons Learned Project Directorate, Electrical and Reactor Systems Branch)
*Matthew McConnell	Senior Electrical Engineer	NRC/NRR/JLD/JERB
Sunil Weerakkody	Branch Chief	NRC/NRR/DRA/APHB (Division of Risk Assessment, Probabilistic Risk Assessment Operations & Human Factors Branch)
Mehdi Reisifard	Reliability and Risk Analyst	NRC/NRR/DRA/APLA (Probabilistic Risk Assessment Licensing Branch)
Roy Mathew	Team Leader	NRC/NRR/DE/EEEB (Division of Engineering, Electrical Engineering Branch)

NAME	TITLE	ORGANIZATION
Vijay Goel	Electrical Engineer	NRC/NRR/DE/EEEB
Jerome Bettle	Reactor Systems Engineer	NRC/NRR/DSS/SCVB (Containment and Ventilation Branch)
Craig Kontz	Senior Project Engineer	NRC/Region II/DRP/RPB6 (Region II, Division of Reactor Projects, Reactor Projects Branch 6)
*Jared Nadel	Senior Resident Inspector	NRC/Region II/DRP/RPB6/WBRO (Watts Bar Resident Office)
Gordon Arent	Director, Licensing	TVA
Roger Scott	Licensing	TVA
Bob Bryan	Watts Bar Nuclear Licensing Manager	TVA
Brad Dolan	PWR PRA Manager	TVA
Jerry Riste	Licensing	TVA
Russ Wells	Senior Project Manager, Licensing	TVA
*Tim Page	Licensing	TVA

\*via teleconference

**LER History of Lower Inlet Door Surveillance Testing**

Plant	Door Visual	Door Opening Torque	Door Open Torque
Plant A		1975 - 1; 1976 - 4; 1979 - 2; 1983 - 1	
Plant B		1978 - 1	
Plant A		12/27/1980 - Loose Insulation on two doors	
Plant B		6/28/1983 - One door failed due to glycol on seal	
Plant B		8/23/1983 Five doors had high torque; frame adjusted on three, one cleaned seal, and one closed on a loose RTD cable	
Plant A		12/4/1985, seven doors failed due to frost build-up due to outage work	
Plant A			8/03/1998, review of damage to shock absorbers. Redesigned shock absorbers. <b>No failed surveillance test</b>
Plant A			5/11/2002, One door failed the open part of the test. Torque was about 10% high.
Plant D	7/17/1997, 10 doors had interference due to floor heaving		
Plant C		3/060/1999 - Procedural review showed two doors failed torque test in 1997	
Plant D			3/03/2005, Seven doors failed one of the tests in this surveillance.

Plant C			9/17/2005, Two doors failed one of the tests in this surveillance.
Plant E	12/31/1984, Door Blocks left in		
Plant E			3/12/1986, Five doors did not meet one of the torque criteria
Plant E	3//05/1999, One door was restricted by frost build-up on a glycol line.		
Plant F	9/14/1998, 46 of 48 doors opening restricted due to ice build-up on a glycol line.		
Plant H	3/16/1992, Multiple doors impaired due to floor heaving.		
Plant G	3/18/1992 Eleven doors impaired due to floor heaving.		
Plant KE			5/13/1996, Fifteen doors failed part of their surveillance.
Plant K		2/27/1999, Ice buildup on two doors in bay 1 caused the doors to exceed the opening torque. Ice buildup due to a SG Manway leak inside containment.	

Please direct any inquiries to me at 301-415-6020 or via e-mail at [Robert.Schaaf@nrc.gov](mailto:Robert.Schaaf@nrc.gov)

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Robert G. Schaaf, Senior Project Manager  
Plant Licensing Branch 2-2  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Docket Nos. 50-390 and 50-391

Enclosures:

1. List of Attendees
2. TVA Handout on Industry Surveillance Test History

cc w/encls: Distribution via Listserv

**DISTRIBUTION:**

PUBLIC	RidsNrrPMWattsBar1 Resource	RidsNrrDorl Resource
LPLII-2 Reading	RidsNrrPMWattsBar2 Resource	RidsNrrDe Resource
RidsRgn2MailCenter Resource	RidsNrrLABClayton Resource	RidsNrrDss Resource
RidsNrrDorlLpl2-2 Resource	RidsNrrDraAphb Resource	RidsNrrJLD Resource
RidsNrrDraApla Resource	RidsNrrDrsScvb Resource	RidsNrrDrsStsb Resource
RidsNrrDeEeeb Resource	TWertz, NRR	JQuichocho, EDO
RidsAcrsAcnw_MailCTR Resource	AHon, NRR	CRosales-Cooper, EDO
JTrapp, RGN1	BBeasley, NRR	RSchaaf, NRR
MChernoff, NRR	SBailey, NRR	MMcConnell, NRR
SWeerakody, NRR	RMathew, NRR	VGoel, NRR
JBettle, NRR	CKontz, RGN II	JNadel, RGN II
MReisifard, NRR		

**ADAMS Accession No: ML15331A054 (Pkg.); ML15310A501 (Notice); ML15331A065 (Summary)**

OFFICE	DORL/LPLII-2/PM	DORL/LPLII-2/LA	DORL/LPLII-2/BC	DORL/LPLII-2/PM
NAME	RSchaaf	BClayton	BBeasley	RSchaaf
DATE	12/07/2015	12/07/2015	12/22/2015	12/23/2015

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