

## WBN2Public Resource

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**From:** Poole, Justin  
**Sent:** Tuesday, October 11, 2011 2:56 PM  
**To:** Arent, Gordon  
**Cc:** Milano, Patrick; Campbell, Stephen; WBN2HearingFile Resource  
**Subject:** Fire protection audit plan  
**Attachments:** WBN 2 FP audit plan.docx

Gordon,

Attached is the staff's audit plan for the upcoming fire protection audit. Please review and let us know if you have a question on a specific item. Thanks.

*Justin C. Poole*  
*Project Manager*  
*NRR/DORL/LPWB*  
*U.S. Nuclear Regulatory Commission*  
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**Hearing Identifier:** Watts\_Bar\_2\_Operating\_LA\_Public  
**Email Number:** 560

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**Subject:** Fire protection audit plan  
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**From:** Poole, Justin

**Created By:** Justin.Poole@nrc.gov

**Recipients:**

"Milano, Patrick" <Patrick.Milano@nrc.gov>  
Tracking Status: None  
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Tracking Status: None  
"Arent, Gordon" <garent@tva.gov>  
Tracking Status: None

**Post Office:** HQCLSTR02.nrc.gov

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AUDIT PLAN  
OPERATING LICENSE APPLICATION

WATTS BAR, UNIT 2  
DOCKET NO.: 50-391  
TAC NO.: ME3091

Office of Nuclear Reactor Regulation  
Division of Risk Assessment  
Fire Protection Branch

Background

By letter dated January 11, 2010, Agencywide Documents Access and Management System (ADAMS) Accession Number ML100191732), the Tennessee Valley Authority (TVA) submitted Amendment 97 of Watts Bar, Unit 2, Final Safety Analysis Report (FSAR), which includes Section 9.5.1, "Fire Protection System," which incorporates, by reference, the Watts Bar Fire Protection Report. The U. S. Nuclear regulatory Commission (NRC) and TVA have corresponded through letters regarding their Fire Protection Program. Through this correspondence, TVA submitted information related to the Watts Bar Unit 2 fire protection program, including an "as-designed" version of the Fire Protection Report on August 15, 2011.

The Fire Protection Branch (AFPB) has determined that an audit is an appropriate tool to obtain information needed to complete its review of and clarify information related to the fire protection program for Watts Bar Unit 2.

Regulatory Audit Bases

- Watts Bar "As-Designed" Fire Protection Report, submitted to the NRC on August 18, 2011.
- NRC Requests for Additional information and TVA responses [see enclosed matrix]
- 10 Code of Federal Regulations 50.48 "Fire Protection."
- Appendix A to NRC Branch Technical Position 9.5-1 (APCSB) "Guidelines for Fire Protection for Nuclear Power Plants Docketed Prior to July 1, 1976," August 23, 1976.
- NRC Regulatory Guide 1.189, Revision 2, "Fire Protection for Nuclear Power Plants," October 2009.
- NUREG-0847, "Safety Evaluation Report Related to the Operation of Watts Bar Nuclear Plant, Units 1 and 2," Supplement 18, October 1995.
- NUREG-0847, "Safety Evaluation Report Related to the Operation of Watts Bar Nuclear Plant, Units 1 and 2," Supplement 19, November 1995.
- NUREG-0800, "Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants: LWR Edition," Chapter 9, "Auxiliary Systems," Section 9.5.1.1 "Fire Protection Program."

### Regulatory Audit Scope

The initial audit scope is as follows. Topics may be added or dropped as the review progresses.

- Installed plant fire protection features
- Fire water system
- Tour Auxiliary Control Room
- Tour Auxiliary Building
- Tour Control Building
- Tour Unit 2 Containment
- Staffing and training for Operator Manual Actions (OMAs)
- III.G.2 OMAs
- Alternate Safe Shutdown OMAs – Control Building – Fire Area 48
- Unit 2 Auxiliary Equipment Room CO2 system [FPR Part II, Section 12.3.3]
- Large fire dampers [FPR Part VII – Section 3.4]

### Information and Other Material Necessary for the Audit

The following documentation should be made available during the audit:

- A paper copy of the current Unit 1 Fire Protection Report
- A paper copy of the as-designed Unit 1 and Unit 2 Fire Protection Report
- Paper copies of fire protection related flow diagrams and plant layout diagrams
- Installed plant fire protection features
  - ✓ Operating experience (Unit 1) documentation demonstrating the duration that fire protection equipment has been historically out of service
- Fire Water System
  - ✓ Information related to the deterioration of the piping – samples, pictures, video, etc.
  - ✓ Procedure for OMA 1023 for a fire in IPS-A
  - ✓ Procedure for OMA 1024 for a fire in IPS-B
- Operator Manual Actions
  - ✓ Task to training matrix for Unit 1 OMAs
  - ✓ Task to training matrix for Unit 2 OMAs
- III.G.2 OMAs
  - ✓ Procedures for OMAs 1444 and 1445 for a fire in Rooms 772.0-A15 East, 772.0-A15 West and 772.0-A16
  - ✓ Procedures for OMAs 1540 and 1542 for a fire in Room 737.0-A1B
  - ✓ Procedure for OMA 1023 for a fire in Room 729.0-A6
  - ✓ Procedures for OMAs 1022 and 1023 for a fire in Room 729.0-A14
  - ✓ Timing documentation for recalling operators to control room in the event of a fire
    - ❖ How long does it take?
    - ❖ Drill records if available
- Large fire dampers
  - ✓ UL evaluations referred to in FPR Part VII – Section 3.4

- Alternate Safe Shutdown OMAs
  - ✓ Alternate control room SSD procedure (evacuation of main control room)
  - ✓ Procedures for OMAs to operate 2-PCV-1-12; 2-FCV-3-35A; 2-FCV-3-48A; 2-BD-211-B-B; 2-DG-82-A-A
  - ✓ Procedure for OMA to operate 2-MCC-213-A1-A

### Team Assignments

Audit Leader: Charles Moulton, Fire Protection Branch

Audit Members: Daniel Frumkin, Fire Protection Branch  
Bernard Litkett, Fire Protection Branch

NRC Support: Justin Poole, Division of Operating Reactor Licensing  
Region II staff member, TBD

### Logistics

The audit will take place during the week of October 24, 2011.  
The entrance briefing will take place on the morning of Tuesday, October 25.  
The exit briefing will take place on the afternoon of Thursday, October 27.

### Special Requests

Provision is requested for a work and meeting space for the audit team outside the plant protected area.

### Deliverables

Within 45 days of the audit exit, the NRC staff will prepare a detailed audit report documenting the information reviewed during the audit, and any open items that might be outstanding after the audit.

### References

- Watts Bar "As-Designed" Fire Protection Report, submitted to the NRC on August 18, 2011.
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NRC RAI and TVA response Matrix

<b>Date</b>	<b>From</b>	<b>To</b>	<b>Subject</b>
February 9, 2011	NRC	TVA	Fire Protection RAIs group 1
March 10, 2011	NRC	TVA	Fire Protection RAIs group 2
March 16, 2011	TVA	NRC	Partial RAI response
March 31, 2011	TVA	NRC	Partial RAI response
April 25, 2011	NRC	TVA	Fire Protection RAIs group 3
May 6, 2011	TVA	NRC	Partial RAI response
May 23, 2011	NRC	TVA	Fire Protection RAIs group 4
May 26, 2011	TVA	NRC	Partial RAI response
June 7, 2011	TVA	NRC	Partial RAI response
June 8, 2011	NRC	TVA	Fire Protection RAIs group 5
June 17, 2011	TVA	NRC	Partial RAI response
July 1, 2011	TVA	NRC	Partial RAI response
July 21, 2011	NRC	TVA	Fire Protection RAIs group 6
July 22, 2011	TVA	NRC	Partial RAI response
August 5, 2011	TVA	NRC	Partial RAI response
September 14, 2011	NRC	TVA	Fire Protection RAIs group 7
September 30, 2011	TVA	NRC	Partial RAI response