

## NRR-DMPSPERem Resource

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**From:** Schaaf, Robert  
**Sent:** Friday, March 15, 2019 9:31 AM  
**To:** Wells, Russell Douglas  
**Cc:** Hulvey, Kimberly Dawn; Brown, Michael Anthony; Nadel, Jared; Saba, Farideh; Shoop, Undine  
**Subject:** Watts Bar, Unit 2 - Upcoming Steam Generator Tube Inservice Inspection  
**Attachments:** Watts Bar U2R2 Steam Generator Tube Inspection Discussion Points.pdf

Russ,

Inservice inspections of steam generator (SG) tubes play a vital role in assuring SG tube integrity. As we discussed recently, a telephone conference call has been arranged with members of the Tennessee Valley Authority staff to discuss the results of the SG tube inspections to be conducted during the upcoming Watts Bar Nuclear Plant, Unit 2, refueling outage. This call should occur after the majority of the tubes have been inspected, but before the SG inspection activities have been completed. A list of discussion points to facilitate this call is attached.

The NRC staff will document a summary of the conference call, including any material that you provide to the NRC staff in support of the call.

Should you have any questions please contact me via e-mail at [Robert.Schaaf@nrc.gov](mailto:Robert.Schaaf@nrc.gov) or at 301-415-6020, or Farideh Saba at [Farideh.Saba@nrc.gov](mailto:Farideh.Saba@nrc.gov) or at 301-415-6020.

Regards,

*Robert G. Schaaf*

Robert G. Schaaf  
Senior Project Manager

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Office of Nuclear Reactor Regulation  
Division of Operating Reactor Licensing  
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Docket No. 50-391

Attachment:  
Watts Bar U2R2 Steam Generator Tube Inspection Discussion Points

**Hearing Identifier:** NRR\_DMPS  
**Email Number:** 865

**Mail Envelope Properties** (BN7PR09MB269089ADD47F6063ECEEE4E4F9440)

**Subject:** Watts Bar, Unit 2 - Upcoming Steam Generator Tube Inservice Inspection  
**Sent Date:** 3/15/2019 9:30:32 AM  
**Received Date:** 3/15/2019 9:30:00 AM  
**From:** Schaaf, Robert  
  
**Created By:** Robert.Schaaf@nrc.gov

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**Post Office:** BN7PR09MB2690.namprd09.prod.outlook.com

<b>Files</b>	<b>Size</b>	<b>Date &amp; Time</b>	
MESSAGE	1570	3/15/2019 9:30:00 AM	
Watts Bar U2R2 Steam Generator Tube Inspection Discussion Points.pdf			166988

**Options**

**Priority:** Standard  
**Return Notification:** No  
**Reply Requested:** No  
**Sensitivity:** Normal  
**Expiration Date:**  
**Recipients Received:**

## STEAM GENERATOR TUBE INSPECTION DISCUSSION POINTS

The following discussion points have been prepared to facilitate the conference call arranged with the licensee to discuss the results of the steam generator tube inspections to be conducted during the upcoming Watts Bar Nuclear Plant, Unit 2, spring 2019 refueling outage. This conference call is scheduled to occur towards the end of the planned SG tube inspections, but before the licensee completes the inspections and repairs.

The NRC staff plans to document a summary of the conference call as well as any material that is provided in support of the call.

1. Discuss any trends in the amount of primary-to-secondary leakage observed during the recently completed cycle.
2. Discuss whether any secondary side pressure tests were performed during the outage and the associated results.
3. Discuss any exceptions taken to the industry guidelines.
4. For each steam generator, provide a description of the inspections performed including the areas examined and the probes used (e.g., dents/dings, sleeves, expansion-transition, U-bends with a rotating probe), the scope of the inspection (e.g., 100% of dents/dings greater than 5 volts and a 20% sample between 2 and 5 volts), and the expansion criteria.
5. For each area examined (e.g., tube supports, dent/dings, sleeves, etc), provide a summary of the number of indications identified to-date for each degradation mode (e.g., number of circumferential primary water stress corrosion cracking indications at the expansion transition). For the most significant indications in each area, provide an estimate of the severity of the indication (e.g., provide the voltage, depth, and length of the indication). In particular, address whether tube integrity (structural and accident induced leakage integrity) was maintained during the previous operating cycle. In addition, discuss whether any location exhibited a degradation mode that had not previously been observed at this location at this unit (e.g., observed circumferential primary water stress corrosion cracking at the expansion transition for the first time at this unit).
6. Describe repair/plugging plans.
7. Describe in-situ pressure test and tube pull plans and results (as applicable and if available).
8. Discuss the following regarding loose parts:
  - what inspections are performed to detect loose parts
  - a description of any loose parts detected and their location within the SG (including the source or nature of the loose part, if known)
  - if the loose parts were removed from the SG
  - indications of tube damage associated with the loose parts

9. Discuss the scope and results of any secondary side inspection and maintenance activities (e.g., in-bundle visual inspections, feeding inspections, sludge lancing, assessing deposit loading, etc).
10. Discuss any unexpected or unusual results.
11. Provide the schedule for steam generator-related activities during the remainder of the current outage.