

**NRC CONFERENCE CALL  
ST. LUCIE UNIT 2 STEAM GENERATOR INSPECTION  
SEPTEMBER 13, 2012**

**AREVA 86/19 TI REPLACEMENT STEAM GENERATOR (RSG)**

**Overview of Inspection:**

- No tube integrity issues identified
- Average wear rate attenuation continues
- Preliminary OA supports full cycle operation
- Additional preventive plugging will be implemented to increase margin; similar to past inspections
- SONGS operating experience was applied to the inspection; no issues were identified

**Examination Scope for third in-service inspection:**

- 100% Bobbin
- +Point of all periphery tubes hot & cold leg
- +Point diagnostics based on bobbin results
- +Point discretionary profiling

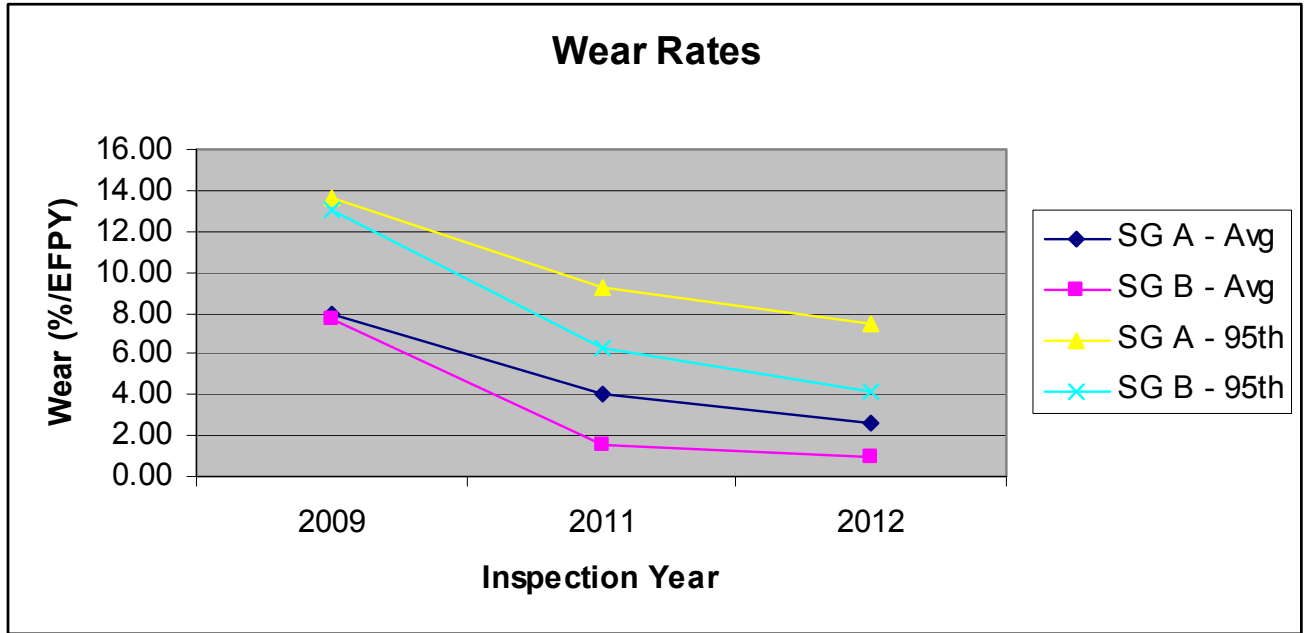
**History of wear indications/ affected number of tubes (Cumulative):**

|             | INSPECTION YEAR |            |            |
|-------------|-----------------|------------|------------|
|             | 2009            | 2011       | 2012       |
| <b>SG A</b> | 3700/ 1231      | 5864/ 1862 | 7646/ 2211 |
| <b>SG B</b> | 2157/ 815       | 2963/ 1125 | 3988/ 1503 |

**Wear rate progression (%/EFPY):**

|             | INSPECTION YEAR |            |             |            |             |            |
|-------------|-----------------|------------|-------------|------------|-------------|------------|
|             | 2009            |            | 2011        |            | 2012        |            |
|             | Avg. Growth     | Upper 95th | Avg. Growth | Upper 95th | Avg. Growth | Upper 95th |
| <b>SG A</b> | 7.9             | 13.6       | 4.0         | 9.2        | 2.6         | 7.5        |
| <b>SG B</b> | 7.7             | 13.0       | 1.6         | 6.3        | 1.0         | 4.2        |

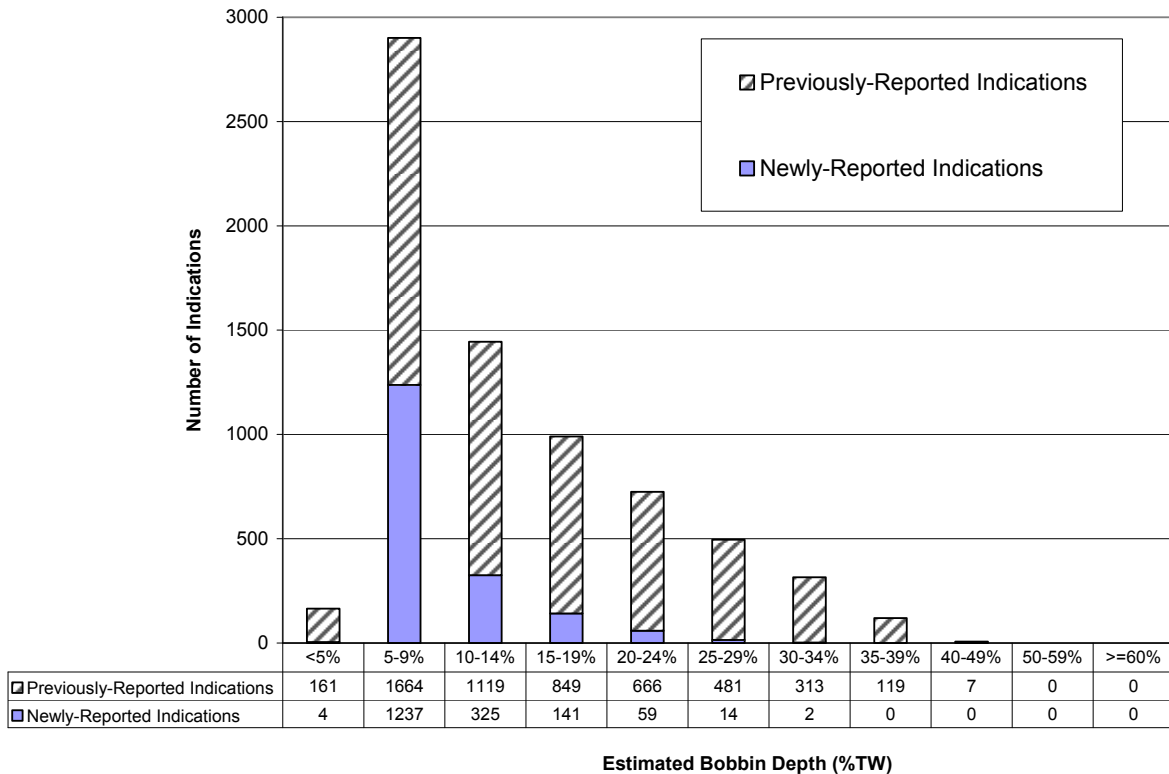
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**Wear distribution:**

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**AVB Wear Indication Depth Distribution  
PSL-2 SGA Sep-2012**



**Preliminary CMOA Results:**

- Independent assessments will be performed by Aptech and Areva
- Maximum wear depth: 40% TW
- Preliminary OA Results shows POB < 5%:
  - 7 required tube plugs in A SG; none in B SG (All at 40%)
  - Additional tubes will be plugged to provide defense in depth
    - Tubes with multiple indications
    - High current wear/wear rate
  - Wear rate increase factor of 24% applied to account for effects of power uprate.
- Plan to inspect next outage

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**Secondary Side Scope:**

- Sludge Lance and Upper Bundle Flush - SG A, SG B
- FOSAR - SG A, SG B
  - Metal shaving ~3" x 1/8" from SG A annulus
  - Beebe size part retrieved from debris screen SG B
- Upper Steam Drum
  - Feedwater Ring Inspection Cover Assessment SG A, SG B
  - Sample of primary separators for wear SG A, SG B
  - General Walkdown SG A, SG B

**Conclusions:**

- Steam Generators continue high, but manageable amount of wear
- No tube integrity issues identified
- Average and statistical wear rate attenuation continues
- Preliminary OA supports full cycle operation
- Additional preventive plugging will be implemented to increase margin; similar to past inspections
- Inspection planned after one cycle of operation