

PRELIMINARY INFORMATION

Davis-Besse Nuclear Power Station, Unit No. 1, 1R22 (March 2022)
Steam Generator Tube Inspection Discussion Points 11 March 2022

The following discussion points have been prepared to facilitate the conference call arranged at the request of the regulator to discuss the results of the steam generator tube inspections being conducted during the refueling outage at Davis-Besse Nuclear Power Station, Unit No. 1. This conference call is scheduled to occur towards the end of the planned SG tube inspections, but before the unit completes the inspections and repairs.

The NRC staff plans to document a publicly available 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.

There has been negligible primary-to-secondary leakage observed during the recently completed cycle. Condenser off-gas grab samples have trended at the limit of detectability. There have been no entry into action levels or increased monitoring per the EPRI Primary to Secondary Leakage Guidelines.

2. Discuss whether any secondary side pressure tests were performed during the outage and the associated results.

No secondary side pressure tests have been performed and none are planned.

3. Discuss any exceptions taken to the industry guidelines.

Davis-Besse has no exceptions to the EPRI guidelines committed to in NEI 97-06.

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 percent of dents/dings greater than 5 volts and a 20 percent sample between 2 and 5 volts), and the expansion criteria.

100% of all in-service tubes will be inspected full-length with the bobbin coil technique. As 100% of in-service tubes will be inspected, there is no expansion criteria.

Special interest inspections on select tubes or areas of interest identified by the bobbin coil technique will be inspected with the array probe technique. These include, but are not limited to:

- Dent indications with voltage change greater than two volts
- All indications of tube to tube support plate wear at drilled tube support plate locations
- Indications of tube to tube support plate wear at broached tube support plate locations that are:
 - newly reported and greater than fourteen percent through wall

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- previously reported with greater than fourteen percent through wall growth

- all indications greater than or equal to forty percent through wall

- Proximity indications identified as having zero gap with adjacent tie rod or tube

Visual examinations of all previously installed tube plugs.

Visual examinations of the tubesheet and channelhead cladding in both steam generators.

5. For each area examined (e.g., tube supports, dent/dings, sleeves, etc), provide the following:

a. 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).

Degradation mechanism	SG 2A	SG 1B
Tube to broached tube support plate wear	2126	864
Tube to drilled tube support plate wear	4	18
Tube to tube or tube to tie rod wear	0	0
Tube wear due to foreign objects	0	0

b. For the most significant indications in each area, provide an estimate of the severity of the indication (e.g., voltage, depth, and length of the indication), including whether tube integrity (structural and accident induced leakage integrity) was maintained during the previous operating cycle. In addition, discuss any analyses performed specifically for the most significant indications to demonstrate tube integrity.

Degradation mechanism	SG	Row	Tube	TSP	Depth	Voltage	Length
Tube to broached tube support plate wear	2A	9	1	16S	43%TW	2.18	1.5"*
Tube to drilled tube support plate wear	1B	40	117	15S	23%TW	0.42	0.31"

%TW = percent through-wall

* length conservatively assumed to be the entire tube support plate thickness

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These and all currently observed indications meet the Condition Monitoring criteria developed prior to the inspections, therefore tube integrity was maintained during the previous operating cycle.

c. 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).

No new degradation mechanisms have been observed thus far.

6. Describe repair/plugging plans.

Currently, one tube in steam generator 1B and nine tubes in steam generator 2A require plugging due to observed wear indications greater than Technical Specification 5.5.8.c criteria (i.e., equal to or exceeding 40%TW). Additional tube plugging may be performed if determined necessary by further analysis.

7. Describe in-situ pressure test and tube pull plans and results (as applicable and if available).

No in-situ pressure tests or tube pulls have been performed and none are planned.

8. Discuss the following regarding loose parts:

a. The inspections performed to detect loose parts.

The bobbin coil technique is utilized for the detection of loose parts. As previously stated, 100% of all in-service tubes will be inspected full-length with the bobbin coil technique.

b. A description of any loose parts detected and their location within the SG (including the source or nature of the loose part, if known).

No loose parts have been detected within either steam generator.

c. If the loose parts were removed from the SG.

No loose parts have been removed from either steam generator.

d. Indications of tube damage associated with the loose parts.

No degradation associated with loose parts has been detected within either steam generator.

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).

No secondary side inspections or maintenance activities have been performed on either steam generator and none are planned.

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10. Discuss any unexpected or unusual results.

No unexpected or unusual results have been detected in either steam generator.

11. Provide the schedule for steam generator-related activities during the remainder of the current outage.

Eddy current examinations are scheduled to complete on or before 14 March 2022.

Tube plugging is scheduled to begin on or before 14 March 2022.

Following tube plugging, equipment removal and vessel closeout will follow.