

June 23, 2003

Mr. J. A. Stall
Senior Vice President, Nuclear and
Chief Nuclear Officer
Florida Power and Light Company
P.O. Box 14000
Juno Beach, Florida 33408-0420

SUBJECT: ST. LUCIE NUCLEAR PLANT, UNIT 2 - SUMMARY OF CONFERENCE CALL
WITH FLORIDA POWER AND LIGHT COMPANY REGARDING THE
2003 STEAM GENERATOR INSPECTIONS (TAC NO. MB8134)

Dear Mr. Stall:

On May 2, 2003, the Nuclear Regulatory Commission staff participated in a conference call with Florida Power and Light Company (FPL) regarding the steam generator (SG) tube inspection activities at the St. Lucie Nuclear Plant, Unit 2, during refueling outage 14. The conference call was strictly voluntary on your part and occurred after the majority of the tubes had been inspected, but before the SG inspection activities were completed. A summary of the conference call is provided in Enclosure 1 and the handout provided by you in support of the conference call is provided in Enclosure 2.

This completes the NRC staff's efforts under TAC No. MB8134.

If you have any question regarding this matter, please contact me at (301) 415-3974.

Sincerely,

/RA/

Brendan T. Moroney, Project Manager, Section 2
Project Directorate II
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket No. 50-389

Enclosures: 1. Summary of Conference Call
2. FPL Handout

cc w/ encl: See next page

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SUMMARY OF NUCLEAR REGULATORY COMMISSION
CONFERENCE CALL WITH FLORIDA POWER AND LIGHT COMPANY
ON MAY 2, 2003, REGARDING 2003 STEAM GENERATOR INSPECTION
RESULTS AT St. LUCIE NUCLEAR PLANT, UNIT 2

On May 2, 2003, the Nuclear Regulatory Commission (NRC) staff participated in a conference call with Florida Power and Light Company (FPL, the licensee) representatives regarding the steam generator (SG) tube inspection activities at St. Lucie Nuclear Plant, Unit 2, during its ongoing refueling outage. The conference call was conducted in response to an NRC letter dated April 8, 2003 (ML030980154).

The issues discussed included the SG tube inspection scope, results, and other related SG activities. FPL provided written material in support of the call and it is included with this summary as Enclosure 2. During the call, the licensee provided the following additional details not included in their handout.

1. The typical bobbin probe diameter is 0.600-inch.
2. The 20 percent rotating probe sample of wear scar indications in "U-bends" included wear scars not only in tubes with U-bends but also those that have two 90-degree bends.
3. The voltage normalization used at St. Lucie will result in a conservative estimate (i.e., larger) of the dent magnitude when compared to the standard industry normalization.
4. The bottom of the expansion transition on the hot-leg side is no more than 0.73-inches below the top of the tubesheet.
5. With respect to the axial outside diameter stress corrosion cracks (ODSCC) at the eggcrate supports, approximately 75 percent of the bobbin indications were being confirmed as flaw indications with a rotating probe. All flaws that are confirmed with a rotating probe will be plugged on detection. The distribution of indications being detected are located primarily at the lower hot-leg tube supports, as expected, based on the temperature changes along the length of the tubes. The number of indications being detected was higher than anticipated.
6. The freespan axial ODSCC indication is located 4-inches above the first hot-leg tube support. The indication is short and was detected with the bobbin probe. There was no ding/dent at the location of this flaw and it is not in the upper bundle as has been detected at other plants. The licensee will be performing a rotating probe inspection of the entire hot-leg portion of this tube and will use a rotating probe to inspect the neighboring six tubes between the first and second hot-leg tube support. The purpose of this expansion scheme was to inspect the neighboring tubes for cracks given the potential for bridging deposits.

7. The NRC asked the licensee about its inspection plans for the 90-degree tube bends given the inspection results from a Westinghouse plant in which circumferential cracks were found in the U-bend region of tubes which have bend radii similar to the 90-degree bends. The licensee indicated they were performing some rotating probe sampling at ding locations and at wear scars. This sampling will provide some information regarding the 90-degree bends. In addition, the licensee indicated they have never identified any cracks in the U-bend region of rows 1 and 2, although they have plugged some row 1 and 2 tubes for other reasons (e.g., probe stuck in tube, probe did not rotate properly through the U-bend region resulting in data quality issues).
8. To date, no cracks have been identified at wear scars during this outage.
9. With respect to degradation on the cold-leg side of the steam generators, the licensee indicated they identified several axial ODSCC indications at the eggcrate supports, as was expected. In addition, they identified one tube with a volumetric, wear-like indication in a Row 2 tube. This tube is along the blowdown lane and the indication is approximately 3 to 4-inches above the top of the tubesheet. No loose part was found at this location.
10. Regarding the review of previous eddy current data at locations where they detected indications this outage (i.e., history lookbacks), the licensee indicated they typically review the 1992 data (i.e., their first digital inspection) and compare it to the present data. This comparison assists the licensee in determining whether the indication is attributable to a flaw or some other reason (e.g., manufacturing). In addition, they indicated that they report all flaws regardless of through-wall depths (i.e., they eliminated a previous requirement that indications must be 1-percent through-wall).
11. With respect to an axial ODSCC indication at the top of the tubesheet, which was initially estimated to be approximately 2.8 inches in length, the licensee indicated they were still evaluating the prior history of this flaw and would be performing a more detailed eddy current data profiling of the flaw.
12. Regarding the size of indications detected this outage, the licensee indicated they were consistent with prior inspections.

At the end of the call, the licensee indicated they would notify the NRC staff if they had leakage during an in situ test, if a tube failed to satisfy the performance criteria, or if any new or unusual results were obtained such as the detection of cracks in the 90-degree bends or additional freespan cracks.

The NRC staff did not identify any other issues requiring follow-up at this time.

Mr. J. A. Stall
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ST. LUCIE PLANT

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