



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

September 18, 2014

LICENSEE: Florida Power & Light Co.

FACILITY: St. Lucie Plant, Unit No. 1

SUBJECT: SUMMARY OF AUGUST 21, 2014, CONFERENCE CALL  
WITH FLORIDA POWER & LIGHT COMPANY REGARDING  
THE FALL 2013 STEAM GENERATOR TUBE INSPECTIONS  
AT ST. LUCIE, UNIT NO. 1

On August 21, 2014, the U.S. Nuclear Regulatory Commission (NRC) staff participated in a conference call with representatives of Florida Power & Light Company (the licensee) regarding the steam generator tube inspection results assessment by the licensee for St. Lucie Plant, Unit No. 1. A list of the conference call participants is contained in Enclosure 1. In support of the conference call, the licensee provided the presentation slides prior to the call, which were added to the Agencywide Documents Access and Management System under Accession No. ML14232A067 and linked to the meeting notice. The NRC staff's conference call summary is provided in Enclosure 2 to this letter.

Members of the public were in attendance. Public Meeting Feedback forms were not received. Please direct any inquiries to me at 301-415-1447, or e-mail me at [farideh.saba@nrc.gov](mailto:farideh.saba@nrc.gov).

*Farideh E. Saba*

Farideh E. Saba, Senior Project Manager  
Plant Licensing Branch II-2  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Docket No. 50-335

Enclosures:

1. List of Participants
2. Conference Call Summary

cc w/encls.: Distribution via Listserv

LIST OF PARTICIPANTS  
AUGUST 21, 2014, CONFERENCE CALL  
WITH FLORIDA POWER & LIGHT  
ST. LUCIE PLANT, UNIT NO. 1  
FALL 2013 STEAM GENERATOR TUBE INSPECTION RESULTS ASSESSMENT

NUCLEAR REGULATORY COMMISSION

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## CONFERENCE CALL SUMMARY

### REGARDING FALL 2013 STEAM GENERATOR TUBE INSPECTION RESULTS

#### AT ST. LUCIE NUCLEAR PLANT UNIT NO. 1

#### DOCKET NO. 50-335

On August 21, 2014, the U.S. Nuclear Regulatory Commission (NRC) staff participated in a conference call with representatives of Florida Power & Light Company (the licensee) regarding the steam generator (SG) tube inspection results assessment by the licensee for St. Lucie Plant, Unit No. 1. A list of the conference call participants is contained in Enclosure 1. In support of the conference call, the licensee provided the presentation slides prior to the call, which were added to the Agencywide Documents Access and Management System (ADAMS) under Accession No. ML14232A067 and linked to the meeting notice. The licensee provided this information, in part, to support the NRC staff's review of the licensee's submitted St. Lucie Plant, Unit No. 1 Refueling Outage SL 1-25 Steam Generator Tube Inspection Special Report (ADAMS No. ML14127A008).

The St. Lucie Plant, Unit No. 1 replacement SGs were manufactured by Babcock & Wilcox Canada and installed in 1997. Each of the two SGs has 8523 thermally treated Alloy 690 tubes. The SGs have 7 horizontal supports that incorporate the lattice grid design and the tubes are in a triangular pitch configuration. The U-bend section of the tube bundle includes 12 flat fan bar supports. The horizontal supports and U-bend support materials are 410S stainless steel. The licensee has performed five inspections, listed on page 4 of the slides, since the SG replacement.

Additional clarifying information provided by the licensee, in response to the NRC staff questions, is summarized below:

- Regarding the inspections shown on page 4 of the slides, the licensee clarified that when the SG inspections were performed in 1999 and 2001 (after SG replacement in 1997), the industry guidelines did not require 100 percent inspections to be performed during the first refueling outage following SG replacement.
- The 11 tubes plugged during the 1999 outage were plugged to address an isolated manufacturing issue. The scope of inspections was expanded to ensure the affected locations were inspected.
- The licensee clarified that the tubesheet map, on page 7 of the slides, was the cold-leg of the SG, but that the indications represented all the tubes with fan bar wear indications, regardless of indication location.
- Wear indications removed from service on page 9 (last bullet) was for fan bar wear indications.

Enclosure 2

- The 2.8-percent probability of burst for two cycles, as shown on page 9 of the slides, was confirmed by the licensee to mean a 2.8-percent probability of exceeding the technical specification performance criteria. The licensee clarified that the new fan bar wear growth was assumed to start at the time the extended power uprate was implemented, which was July 2012. The licensee also clarified that the reference to wear indications removed from service on page 9 (last bullet) was for fan bar wear indications.
- Regarding the conclusions, page 10 of the slides, the licensee stated that it plans to inspect the SGs after two cycles of operations (i.e., perform a single skip cycle), so the next inspection is planned for September 2016, and it will include 100-percent of the tubes.

At the end of the call, a member of the public asked the NRC staff the following questions:

1. What are the acceptance criteria for the SG exams that determine how often SG inspections are performed?
2. What are the criteria for determining the scope of the SG exams performed by the licensee?
3. Was there a requirement for a complete cycle to be performed under extended power uprate conditions before the SG exams were completed?
4. When is the SG Tube Inspection Report for St. Lucie, Unit No. 2, due (for the SG inspections that were performed in the spring of 2014)?

In response to the above questions from the public, the NRC staff indicated that:

1. The licensee is responsible for performing an operational assessment of the SGs and determining how long they can operate and still meet the performance criteria of the plant technical specifications. Based on the condition of the SGs, the licensee may be able to run for more than one operational cycle before performing additional SG inspections; however, there is a maximum limit in the technical specifications on the number of times an inspection can be skipped. For St. Lucie, Unit 1, the plant can be operated for a maximum of three operating cycles before inspections are required (i.e., two SG inspections can be skipped).
2. The licensee is responsible for determining the scope of the SG tube inspections that are performed each outage, in accordance with the plant technical specifications. While the technical specifications do have a prescriptive component that specifies a minimum percentage of tubes that must be inspected at various points during the life of a SG, meeting the performance-based criteria of ensuring tube integrity usually results in licensees performing SG tube inspections that exceed the minimums specified in the technical specifications.

3. There is no requirement for a complete operating cycle to be completed under uprate conditions before the SG inspections are performed, but the licensee is responsible for performing an operational assessment that accounts for any changes in degradation growth rates, such as the extended power uprate at St. Lucie, Unit 1. The NRC staff noted that this is why the increased growth rate was assumed to start when the extended power uprate conditions were implemented (i.e., approximately 4 months after the previous operating cycle had started), and not at the beginning of the previous operating cycle.
4. The licensee is required to submit a SG Tube Inspection Report within 180 days after startup of the plant, following an inspection. The licensee clarified that the report for Unit 2 is due to the NRC on October 1, 2014.

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**/RA/**

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**ADAMS Accession Nos.: Meeting Summary ML14240A558**

**Meeting Notice ML14232A104**

**Meeting Slides: ML14232A067**

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