May 10, 2007

Mr. William Levis
Senior Vice President & Chief Nuclear Officer
PSEG Nuclear LLC - N09
Post Office Box 236
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SUBJECT: SUMMARY OF CONFERENCE CALL WITH PSEG NUCLEAR LLC TO DISCUSS THE FALL 2006 STEAM GENERATOR TUBE INSPECTIONS AT SALEM NUCLEAR GENERATING STATION, UNIT NO. 2 (TAC NO. MD3326)

Dear Mr. Levis:

On October 18, 2006, the Nuclear Regulatory Commission (NRC) staff participated in a conference call with PSEG Nuclear LLC (PSEG) to discuss the 2006 steam generator (SG) tube inspection activities taking place during refueling outage 2R15 at Salem Nuclear Generating Station, Unit No. 2. To facilitate the discussion, PSEG provided a summary of the 2R15 SG base scope tube inspection and expansion plans, and a table showing the most significant tube indications identified as of October 18, 2006. Enclosed is a brief summary of the conference call as well as the information provided by PSEG. This completes the NRC staff efforts for TAC No. MD3326.

If you have any questions regarding this matter, I may be reached at 301-415-1420.

Sincerely,

***/ra/***

Richard B. Ennis, Senior Project Manager
Plant Licensing Branch I-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-311

Enclosures:
1. Summary of Conference Call
2. Summary of 2R15 SG Base Scope Tube Inspection and Expansion Plans
3. Table of Tube Indications

cc w/encls: See next page

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SUMMARY OF CONFERENCE CALL WITH PSEG NUCLEAR LLC

FALL 2006 STEAM GENERATOR TUBE INSPECTIONS

SALEM NUCLEAR GENERATING STATION, UNIT NO. 2

DOCKET NO. 50-311

On October 18, 2006, the Nuclear Regulatory Commission (NRC) staff participated in a conference call with PSEG Nuclear LLC (PSEG or the licensee) to discuss the 2006 steam generator (SG) tube inspection activities taking place during refueling outage 2R15 at Salem Nuclear Generating Station, Unit No. 2 (Salem Unit 2).

Salem Unit 2 has four Westinghouse Model 51 SGs. Each SG contains approximately 3400 mill-annealed Alloy 600 tubes. Each tube has a nominal outside diameter of 0.875-inch and a nominal wall thickness of 0.050-inch. The tubes were explosively expanded (WEXTEX) at both ends for the full length of the tubesheet and are supported by a number of drilled-hole carbon steel tube supports. The row 1 tubes were preventatively plugged. The SGs are scheduled to be replaced during the next refueling outage in spring 2008 (2R16).

To facilitate the discussion, PSEG provided a summary of the 2R15 SG base scope tube inspection and expansion plans, and a table showing the most significant tube indications identified as of October 18, 2006 (Enclosures 2 and 3). In addition to the written material provided by the licensee, the following additional clarifying information was discussed during the conference call.

The licensee took two exceptions to the Pressurized Water Reactor (PWR) SG Examination Guidelines. The first exception was to calibrate the rotating coil with a 20% inside diameter (ID) axial and circumferential notch rather than with a 40% ID notch. An analysis was performed using data from a sister plant that has both the 20% and 40% throughwall notches in its calibration standard to demonstrate that the technique used at Salem Unit 2 is essentially equivalent to that recommended in the guidelines. The second exception was that analysts were not required to review overcalls. These two exceptions have been in place since 2R13.

At the time of the conference call, the licensee had acquired 50% to 60% of the data, and had analyzed approximately 32% to 50%. Bobbin coil inspections were almost completed and the licensee had completed about 15% of rotating pancake coil (RPC) inspections in the tubesheet region of one SG. The RPC inspections of the U-bend region of the row 9 and 10 tubes were almost complete, and no indications had been detected. At the time of the call, there were a lower number of bobbin indications (I-codes) than had been observed in previous inspections. Most of the I-codes identified are manufacturing burnish marks (MBMs). During the past two inspections, 100% of the MBMs were inspected with a rotating probe. The licensee performed a historical review of the bobbin data associated with these MBMs to determine if there was any significant voltage change, but none was identified. In addition, a historical review of the RPC data for these MBMs was performed to confirm none of the indications are flaw-like.

A list of the most significant indications identified as of October 18, 2006, is shown in Enclosure 3. In this table, there are two cold leg thinning indications: one with a 58% throughwall depth and a voltage of 3.75 volts and the other one with a 64% throughwall depth and a voltage of 0.95 volts. A historical review of these indications showed that, during the previous outage, the 58% throughwall indication measured 39% throughwall and had a voltage of 2.3 volts, while the 64% throughwall indication measured 34% throughwall and had a voltage of 1.15 volts. The licensee indicated that it is not uncommon to have such changes in voltage and depth given the low voltages for these indications. Both indications have adequate tube integrity.

The licensee plans to plug all wear indications caused by loose parts in addition to any stress-corrosion cracking (SCC) degradation.

At the time of this call, no in-situ pressure tests or tube pulls were planned, however, if necessary, Electric Power Research Institute (EPRI) in-situ guidelines will be followed.

At the time of the conference call, inspections to detect loose parts were ongoing. Eddy current inspections identified some possible loose part indications. These indications were scheduled to be investigated visually. In addition, the licensee identified the presence of one part by eddy current that had been previously left in service. No wear has been associated with any of the possible loose part indications identified.

Historically, the licensee has detected primary water stress-corrosion cracking (PWSCC) near the top of the tubesheet, PWSCC and outside diameter stress corrosion cracking (ODSCC) at the tube support plate (TSP) elevations, ODSCC at the top of the tubesheet, ODSCC at the TSP elevations (only a few indications primarily at the 4$^{th}$ hot leg TSP and not associated with dents), and SCC (typically PWSCC) at dents (typically at the 1$^{st}$ hot leg tube support: five were detected at the 1$^{st}$ hot leg tube support during the last outage). No degradation has been identified in dings.

The data quality is monitored per revision 6 of the EPRI PWR SG Examination Guidelines. The data quality is similar to past inspections.

On October 20, 2006, another conference call was conducted with the licensee to discuss an axially-oriented ODSCC indication found at a 6.83-volt ding in SG 24. The indication was 1.55 inches above the top of the tubesheet on the hot leg side of the SG. The indication was reported to be 0.26 inch long with a voltage of 0.47 volts. The licensee was expanding the scope of their inspection consistent with the EPRI PWR SG Examination Guidelines.

Based on the information provided, the NRC staff did not identify any technical issues that warranted follow-up action at this time.