February 21, 2006

Mr. William Levis
Senior Vice President & Chief Nuclear Officer
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Post Office Box 236
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SUBJECT: SUMMARY OF CONFERENCE CALL WITH PSEG NUCLEAR LLC TO DISCUSS THE 2005 STEAM GENERATOR TUBE INSPECTIONS AT SALEM NUCLEAR GENERATING STATION, UNIT NO. 2 (TAC NO. MC6729)

Dear Mr. Levis:

On April 21, 2005, the Nuclear Regulatory Commission (NRC) staff participated in a conference call with PSEG Nuclear LLC (PSEG) to discuss the steam generator inspection activities taking place at Salem Nuclear Generating Station, Unit No. 2. The call was conducted in response to an NRC letter dated March 15, 2005. PSEG had provided written responses to the NRC's questions in preparation for the conference call. Enclosed is a brief summary of the conference call prepared by the NRC staff as well as the information provided by PSEG.

If you have any questions about this material, please contact me at (301) 415-1321.

Sincerely,

/RA/

Stewart N. Bailey, Senior Project Manager
Plant Licensing Branch I-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No.: 50-311

Enclosures:
As stated

cc w/encls: See next page

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*concur my memo **OFFICIAL RECORD COPY**

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SUMMARY OF CONFERENCE CALL

PSEG NUCLEAR LLC

SALEM NUCLEAR GENERATING STATION, UNIT NO. 2

STEAM GENERATOR INSPECTION RESULTS

SPRING 2005 REFUELING OUTAGE

On April 21, 2005, the Nuclear Regulatory Commission (NRC) staff participated in a conference call with PSEG Nuclear LLC (the licensee) to discuss ongoing steam generator (SG) inspection activities at Salem Nuclear Generating Station (Salem), Unit No. 2. The call was conducted in response to an NRC letter to the licensee dated March 15, 2005. The licensee provided written responses to the questions outlined in the NRC letter to support the conference call. The licensee's responses are provided in Enclosure 2. The discussion topics included the SG tube inspection scope, results, and other related SG activities. This summary focuses on those topics where the NRC staff required additional clarification.

Salem Unit No. 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 inches and a nominal wall thickness of 0.050 inches. 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 NRC staff asked the licensee to expand on its response to Question 1 pertaining to primary-to-secondary leakage. The licensee indicated that leakage was estimated to be on the order of 0.01 gallons per day based upon activity levels identified on a condensate polisher resin sample. The licensee indicated that this leakage estimate was not based upon an approved method identified in the Electric Power Research Institute (EPRI) primary-to-secondary leak guidelines. The licensee also explained that periodic SG blowdown samples with detectable activity have been identified in the past. The licensee believes that these result from past leakage in the SG and are not necessarily indicative of a current leak. Finally, the licensee stated that secondary system tritium levels are their principle means of detecting primary-to-secondary leakage. Secondary system tritium levels remained below background throughout the past operating cycle.

The staff also asked the licensee to expand upon its response to Question 4 pertaining to SG inspection scope (specifically regarding detection of crack-like indications at wear indications) and for dings/dents in colder regions of the SG tubes (beyond the 04H tube support). The licensee indicated that rotating pancake coil (RPC) (using +Point^{TM}) inspections of bobbin coil indications of wear or cold leg thinning occur under three conditions: (1) upon detection of a new indication; (2) if the indication is pluggable; or (3) if the indication experiences a significant growth rate (>20% through-wall from the last inspection). The licensee had not finished

identifying the current population of anti-vibration bar (AVB) wear indications that would be RPC inspected at the time of the phone call, but expected about 25 new and 9 pluggable AVB wear indications would meet their RPC inspection criteria. Regarding RPC inspection of dents and dings, the licensee indicated that they follow the EPRI SG inspection guideline pertaining to critical areas for RPC inspection of dings and dents for crack-like indications. The licensee's critical area is a function of temperature and dent voltage with the majority of inspection focusing on dents occurring at the 01H to 04H tube support plates. No cold leg dent or ding RPC inspections were in the current inspection scope. The licensee indicated that it has typically only identified cracking at dents at the 01H and 02H tube supports. Inspection scope includes the 03H and 04H tube supports to ensure a conservative inspection buffer zone based on plant operating experience. Further, the licensee indicated that the only cracking at cold leg dents in other plants with Series 51 SGs occurred in a plant with much more degradation at the tube-support intersections. The licensee felt that its inspection scope adequately ensured tube integrity.

In response to the NRC staff's Question 5 regarding the number and type of indications identified in the most recent SG inspection, the licensee provided a preliminary summary table of repairable indications and a sample of the eddy current information for the indications identified. The licensee indicated that no new types of degradation were identified at the time the call was conducted. In addition, the amount of degradation was consistent with expectations. The licensee also stated that all the indications identified at tube-support plates were coincident with dents that had a voltage range of 1.3 volts to 4.7 volts. The indications at dents were confined to the 01H and 02H supports. The licensee stated that the number of indications identified in the tubesheet region was consistent with its past experience.

The staff noted that the licensee will perform RPC inspection on a smaller percentage of wear scar, dent, and ding locations than many other licensees. The staff noted that crack-like indications coincident with wear scars have been identified at other plants. The staff also noted that the location of stress-corrosion cracking at dings or dents can not always be predicted based on temperature alone, since tube material and tube stress also influence cracking susceptibility. This consideration has led many licensees to inspect all dented and dinged locations above a specific voltage threshold with RPC probes to confirm the absence of cracking at these locations.

The staff did not identify any issues that warrant follow-up at the time of the call. Additional review of the issues discussed above may be performed when the staff reviews the licensee's SG inspection summary reports that will be submitted in accordance with the Technical Specifications.