March 29, 2007

Mr. William Levis
Senior Vice President & Chief Nuclear Officer
PSEG Nuclear LLC - N09
Post Office Box 236
Hancocks Bridge, NJ 08038

SUBJECT: SALEM NUCLEAR GENERATING STATION, UNIT NO. 2, ISSUANCE OF AMENDMENT RE: STEAM GENERATOR TUBE INTEGRITY (TAC NOS. MD1193 AND MD0106)

Dear Mr. Levis:

The Commission has issued the enclosed Amendment No. 262 to Facility Operating License No. DPR-75 for the Salem Nuclear Generating Station, Unit No. 2. This amendment consists of changes to the Technical Specifications (TSs) in response to your application dated April 6, 2006, as supplemented by letters dated January 19, and February 27, 2007.

The amendment revises the TSs related to steam generator (SG) tube integrity consistent with Revision 4 to Technical Specification Task Force (TSTF) Standard Technical Specification Change Traveler 449 (TSTF-449), “Steam Generator Tube Integrity.” A notice of availability for this TS improvement using the consolidated line item improvement process was published in the *Federal Register* on May 6, 2005 (70 FR 24126). As stated in your letter dated February 15, 2006, the amendment is also the modification of the SG portion of the TSs requested in Nuclear Regulatory Commission (NRC) Generic Letter (GL) 2006-01, "Steam Generator Tube Integrity and Associated Technical Specifications." The NRC staff considers the amendment to be an acceptable and complete response to GL 2006-01. This completes the NRC staff’s efforts on TAC No. MD0106 for the review associated with the GL.

A copy of our safety evaluation is also enclosed. Notice of Issuance will be included in the Commission's biweekly *Federal Register* notice.

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. Amendment No. 262 to License No. DPR-75
2. Safety Evaluation

cc w/encls: See next page

A copy of our safety evaluation is also enclosed. Notice of Issuance will be included in the Commission's biweekly *Federal Register* notice.

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

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2. Safety Evaluation

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Salem Nuclear Generating Station, Unit Nos. 1 and 2

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PSEG NUCLEAR, LLC

EXELON GENERATION COMPANY, LLC

DOCKET NO. 50-311

SALEM NUCLEAR GENERATING STATION, UNIT NO. 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 262
License No. DPR-75

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment filed by PSEG Nuclear LLC, acting on behalf of itself and Exelon Generation Company, LLC (the licensees) dated April 6, 2006, as supplemented by letters dated January 19, and February 27, 2007, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in Title 10 of the *Code of Federal Regulations* (10 CFR), Chapter I;

   B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;

   C. There is reasonable assurance: (I) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations set forth in 10 CFR Chapter I;

   D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and

   E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. DPR-75 is hereby amended to read as follows:

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. , are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of its date of issuance and shall be implemented within 60 days.

FOR THE NUCLEAR REGULATORY COMMISSION

/ra/

Harold K. Chernoff, Chief
Plant Licensing Branch I-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Facility Operating License
and the Technical Specifications

Date of Issuance: March 29, 2007

ATTACHMENT TO LICENSE AMENDMENT NO. 262

FACILITY OPERATING LICENSE NO. DPR-75

DOCKET NO. 50-311

Replace the following page of Facility Operating License No. DPR-75 with the attached revised page as indicated. The revised page is identified by amendment number and contains marginal lines indicating the areas of change.

Remove	Insert
Page 4	Page 4

Replace the following pages of the Appendix A, Technical Specifications, with the attached revised pages as indicated. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

Remove	Insert
V	V
XII	XII
1-4	1-4
1-5	1-5
3/4 4-9	3/4 4-9
3/4 4-10	3/4 4-10 through 3/4 4-15a
3/4 4-11	- - -
3/4 4-12	- - -
3/4 4-13	- - -
3/4 4-14	- - -
3/4 4-15	- - -
3/4 4-15a	- - -
3/4 4-17	3/4 4-17
3/4 4-18	3/4 4-18
3/4 4-19b	3/4 4-19b
6-19b	6-19b
- - -	6-19c
- - -	6-19d
- - -	6-19e
- - -	6-19f
6-21	6-21
6-24a	6-24a
- - -	6-24b

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 262 TO FACILITY OPERATING LICENSE NO. DPR-75

PSEG NUCLEAR, LLC

EXELON GENERATION COMPANY, LLC

SALEM NUCLEAR GENERATING STATION, UNIT NO. 2

DOCKET NO. 50-311

1.0 INTRODUCTION

By letter dated April 6, 2006, as supplemented by letters dated January 19, and February 27, 2007, PSEG Nuclear, LLC (the licensee) submitted a request for changes to the Salem Nuclear Generating Station (Salem), Unit No. 2, Technical Specifications (TSs). The proposed changes would revise the existing steam generator (SG) tube surveillance program. The changes are modeled after Technical Specification Task Force (TSTF) traveler TSTF-449, Revision 4, "Steam Generator Tube Integrity," and the model safety evaluation (SE) prepared by the Nuclear Regulatory Commission (NRC or the Commission) and published in the *Federal Register* on March 2, 2005 (70 FR 10298). In this regard, the scope of the application includes changes to the definition of leakage, changes to the primary-to-secondary leakage requirements, changes to the SG tube surveillance program (SG tube integrity), changes to the SG reporting requirements, and associated changes to the TS Bases.

The supplements dated January 19, and February 27, 2007, provided additional information that clarified the application, did not expand the scope of the application as originally noticed, and did not change the NRC staff's original proposed no significant hazards consideration determination as published in the *Federal Register* on July 18, 2006 (71 FR 40753).

2.0 REGULATORY EVALUATION

The background, description, and applicability of the proposed changes associated with the SG tube integrity issue and the applicable regulatory requirements were included in the NRC staff's model SE published in the *Federal Register* on March 2, 2005 (70 FR 10298). The "Notice of Availability of Model Application Concerning Technical Specification Improvement to Modify Requirements Regarding Steam Generator Tube Integrity Using the Consolidated Line Item Improvement Process," was published in the *Federal Register* on May 6, 2005 (70 FR 24126), and made the model SE available for licensees to reference.

3.0 TECHNICAL EVALUATION

3.1 Overview

In its April 6, 2006, application, and January 19, and February 27, 2007, supplements, the licensee proposed changes to the TSs that are modeled after TSTF-449. The NRC model SE provides a detailed evaluation of the proposed changes by the licensee in its application. Consistent with TSTF-449, the proposed TS changes include: (1) a revised definition of LEAKAGE, (2) a revised TS 3.4.7.2 "Reactor Coolant System Operational Leakage," (3) a new TS 6.8.4.i, "Steam Generator (SG) Program," (4) a revised TS 3/4.4.6, "Steam Generator (SG) Tube Integrity," (5) a new TS 6.9.1.10, "Steam Generator Tube Inspection Report," and (6) revised index pages to reflect the proposed changes. There were minor differences between TSTF-449 and the licensee's application. These included differences in the facility licensing basis (compared to that discussed in TSTF-449) and differences in TS format and numbering. These differences are discussed below.

With respect to the differences in the facility licensing basis, the differences did not invalidate the technical evaluation of TSTF-449; rather, they resulted in the licensee having to deviate from some of the modifications discussed in TSTF-449 or they resulted in slight differences in the requirements. For example, the licensee proposed in its TSs to enter cold shutdown "within the following 30 hours" after achieving hot standby (with hot standby being entered within 6 hours) when tube integrity is not maintained (or not verified within the required time period when a tube is inadvertently not plugged). This proposal is slightly different than TSTF-449, which indicates that cold shutdown should be entered within 36 hours. Another difference in the facility licensing basis relative to TSTF-449 is that the licensee indicated in its TS Bases that the dose consequences are within the limits of Section 50.67 of Title 10 of the *Code of Federal Regulations* (10 CFR), rather than Part 100 as indicated in TSTF-449, since the plant's current licensing basis is 10 CFR 50.67. It is important to note that the dosage contribution from primary-to-secondary leakage will be within the 10 CFR 50.67 limits when the assumptions in the accident analyses (e.g., on the amount of primary-to-secondary leakage) are satisfied. Since these differences were minor in nature, consistent with the plant's licensing basis, or consistent with the intent of TSTF-449, the NRC staff determined they were acceptable.

In addition to these minor changes, the licensee proposed to include a previously approved alternate repair criteria into their proposed new TSs. The structure of TSTF-449 allows licensees to incorporate alternate repair criteria into the TSTF-449 format. By incorporating the previously-approved repair criteria into the TSTF-449 format, there were several additions, deletions, and changes to the requirements. These changes (including additions and deletions) were made as a result of the format, content, and performance-based approach of TSTF-449. The NRC staff verified that (a) the inspection criteria associated with these repair criteria and methods were moved, as appropriate, to the inspection section of the proposed SG TSs, (b) the repair criteria were moved, as appropriate, to the repair criteria section of the proposed SG TSs, (c) the reporting requirements were moved to the reporting section of the proposed SG TSs, and (d) a description of the alternate repair criteria was added to the TS Bases. As a result of incorporating these requirements into the TSTF-449 format, a pre-existing notification requirement associated with a previously approved repair criteria was deleted since the requirement was no longer necessary. This requirement was no longer necessary because the licensee incorporated the limits that would require the NRC to be notified into the definition of tube integrity (and the plant cannot operate when tube integrity is not maintained under the

proposed new SG TSs). In incorporating these alternate tube repair criteria in the new TS format, it is important to note that the lower portion of the tube in the hot-leg tubesheet region may only be excluded from inspection when the alternate repair criteria in TS 6.8.4.i.c.1 are implemented and that the repair criteria are only applicable to SGs with mill annealed Alloy 600 tubes that were explosively expanded into the tubesheet using the Westinghouse explosive tube expansion (WEXTEX) method.

With respect to the differences in numbering of the TSs, these differences were administrative in nature and did not affect the technical adequacy of the submittal. As a result, the NRC staff determined they were acceptable. With respect to the differences in the format of the TSs, these differences resulted in listing the requirements in sentence format rather than tabular format and using slightly different terminology. In addition, there are several sections in the TSTF-449 Bases that are not included in the proposed Bases since the format of the licensee's Bases differ from the standard TSs. Since these differences were administrative in nature and did not affect the technical adequacy of the submittal, the NRC staff determined they were acceptable.

In addition to the above, the licensee also proposed a few changes that went beyond TSTF-449. For example, the licensee proposed an editorial change (i.e., adding a period) in TS 1.19 and correcting a typographical error (i.e., removing the word "during") in Action b. of TS 3.4.7.2, and correcting the spelling of a word (i.e., iodine) in TS 6.8.4.g.9. Since these differences were administrative in nature and did not affect the technical adequacy of the submittal, the NRC staff determined they were acceptable. The licensee also made minor wording changes to prevent confusion. For example, the licensee replaced "performed" with "completed" to avoid confusion regarding when the verification that primary-to-secondary leakage was within limits was to be performed/completed. The licensee also added some text to their Operational Leakage Bases section. Since the added text was generally consistent with the standard TSs as modified to reflect existing requirements and the plant's licensing basis, the NRC staff determined it was acceptable. The remainder of the application was consistent with or more limiting than TSTF-449.

In summary, the NRC staff determined that the model SE is applicable to this review and finds the proposed changes acceptable.

3.2 Conclusion

The proposed TS changes establish a programmatic, largely performance-based regulatory framework for ensuring SG tube integrity is maintained. The NRC staff finds that it addresses key shortcomings of the current framework by ensuring that SG programs are focused on accomplishing the overall objective of maintaining tube integrity. It incorporates performance criteria for evaluating tube integrity that the NRC staff finds consistent with the structural margins and the degree of leak tightness assumed in the current plant licensing basis. The NRC staff finds that maintaining these performance criteria provides reasonable assurance that the SGs can be operated safely without increase in risk.

The revised TSs will contain limited specific details concerning how the SG Program is to achieve the required objective of maintaining tube integrity; the intent being that the licensee will have the flexibility to determine the specific strategy for meeting this objective. However, the NRC staff finds that the revised TSs include sufficient regulatory constraints on the

establishment and implementation of the SG Program such as to provide reasonable assurance that tube integrity will be maintained.

Failure to meet the performance criteria will be reportable pursuant to the requirements in 10 CFR 50.72 and 10 CFR 50.73. The NRC reactor oversight process provides a process by which the NRC staff can verify that the licensee has identified any SG Program deficiencies that may have contributed to such an occurrence and that appropriate corrective actions have been implemented.

In conclusion, the NRC staff finds that the TS changes proposed by the licensee in its April 6, 2006, application, and January 19, and February 27, 2007, supplements conform to the requirements of 10 CFR 50.36 and establish a TS framework that will provide reasonable assurance that SG tube integrity is maintained without undue risk to public health and safety.

The licensee included in its application the revised TS Bases to be implemented with the TS change. The NRC staff finds that the TS Bases Control Program is the appropriate process for updating the affected TS Bases pages and has, therefore, not included the affected Bases pages with this amendment.

4.0 STATE CONSULTATION

In accordance with the Commission's regulations, the New Jersey State official was notified of the proposed issuance of the amendment. The State official had no comments.

5.0 ENVIRONMENTAL CONSIDERATION

The amendment changes a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and changes surveillance requirements. The NRC staff has determined that the amendment involves no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendment involves no significant hazards consideration, and there has been no public comment on such finding (71 FR 40753). Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b) no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendment.

6.0 CONCLUSION

The Commission has concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

7.0 REFERENCES

A complete list of references used to complete this review can be found in the NRC's model SE published in the *Federal Register* on March 2, 2005 (70 FR 10298).

Principal Contributor: G. Makar

Date: March 29, 2007