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

August 25, 2010

Mr. Thomas Joyce
President and Chief Nuclear Officer
PSEG Nuclear LLC
P.O. Box 236
Hancocks Bridge, NJ 08038

SUBJECT: SCOPING AND SCREENING AUDIT SUMMARY REGARDING THE SALEM NUCLEAR GENERATING STATION, UNITS 1 AND 2, LICENSE RENEWAL APPLICATION (TAC NOS. ME1834 AND ME1836)

Dear Mr. Joyce:

By letter dated August 18, 2009, Public Service Enterprise Group Nuclear, LLC, submitted an application pursuant to Title 10 of the *Code of Federal Regulations* Part 54 (10 CFR Part 54) for renewal of Operating License Nos. DPR-70 and DPR-75 for the Salem Nuclear Generating Station Units 1 and 2, respectively. The staff of the U.S. Nuclear Regulatory Commission (NRC or the staff) is reviewing this application in accordance with the guidance in NUREG-1800, "Standard Review Plan for Review of License Renewal Applications for Nuclear Power Plants."

During the week of January 11, 2010, the staff led a project team responsible for auditing and reviewing the applicant's administrative controls governing implementation of the license renewal application (LRA) scoping and screening methodology. The staff reviewed the technical basis for selected scoping and screening results for various plant systems, structures, and components. In addition, the staff reviewed quality attributes for aging management programs, quality practices used during LRA development and the training for personnel that developed the LRA. A summary of the audit and review results is enclosed for your information. No specific action or written response is required.

If you have any questions, please contact me by telephone at 301-415-2981 or by e-mail at bennett.brady@nrc.gov.

Sincerely,

Bennett M. Brady, Project Manager
Projects Branch 1
Division of License Renewal
Office of Nuclear Reactor Regulation

Docket Nos. 50-272 and 50-311

Enclosure:
As stated

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SCOPING AND SCREENING METHODOLOGY TRIP REPORT FOR THE SALEM LICENSE RENEWAL APPLICATION

I. Introduction

During the week of January 11-22, 2010, the Division of License Renewal, performed an audit of the PSEG Nuclear LLC (the applicant), license renewal scoping and screening methodology developed to support the license renewal application (LRA) for Salem Nuclear Generating Station, Units No. 1 and 2 (Salem). The audit was performed at the applicant's facility located at the southern end of Artificial Island in Lower Alloways Creek Township, Salem County, New Jersey. The focus of the staff's audit was the applicant's administrative controls governing implementation of the LRA scoping and screening methodology and review of the technical basis for selected scoping and screening results for various plant systems, structures, and components (SSCs). The audit team also reviewed the quality attributes of aging management programs (AMPs), quality practices used by the applicant to develop the LRA, and training of personnel that developed the LRA.

The regulatory bases for the audit were Title 10 of the *Code of Federal Regulations* Part 54, "Requirements for Renewal of Operating Licenses for Nuclear Power Plants" (10 CFR Part 54) (the Rule) and NUREG-1800, "Standard Review Plan for Review of License Renewal Applications for Nuclear Power Plants," Revision 1 (SRP-LR). In addition, the applicant developed the LRA in accordance with Nuclear Energy Institute (NEI) 95-10, "Industry Guidelines for Implementing the Requirements of 10 CFR 54 – The License Renewal Rule" Revision 6 (NEI 95-10), which the NRC has endorsed via Regulatory Guide 1.188, "Standard Format and Content for Applications to Renew Nuclear Power Plant Operating Licenses" (Regulatory Guide 1.188).

II. Background

10 CFR 54.21, "Contents of Application – Technical Information," requires that each application for license renewal contain an integrated plant assessment (IPA). Furthermore, the IPA must list and identify those structures and components (SCs) subject to an aging management review (AMR) from the SSCs that are included within the scope of license renewal. 10 CFR 54.4(a) identifies the plant SSCs within the scope of license renewal. SCs within the scope of license renewal are evaluated to determine if they are long-lived and passive equipment and, therefore, subject to an AMR in accordance with 10 CFR 54.21(a)(1).

III. Scoping Methodology

The scoping evaluations for the Salem LRA were performed by the applicant's license renewal project personnel. The audit team conducted detailed discussions with the applicant's license renewal project personnel and reviewed documentation pertinent to the scoping process. The audit team assessed whether the scoping methodology outlined in the LRA and implementation procedures were appropriately implemented and whether the scoping results were consistent with current licensing basis requirements. The audit team noted that the applicant's scoping process was performed in accordance with its written requirements and was consistent with the guidance provided in the SRP-LR and NEI 95-10.

The audit team conducted a review of a sample of randomly selected components from the applicant's plant equipment database to verify that the selected components were correctly identified as being within the scope of license renewal. The audit team reviewed the selected components, which included mechanical, electrical and structural components, using the applicant's documents including the UFSAR, system information and piping and instrumentation drawings to perform its review. The audit team did not identify any components that had not been appropriately included within the scope of license renewal.

The audit team also reviewed a sample of system scoping results for the following systems and structures: chemical and volume control system, component cooling system, radioactive drain system, auxiliary feedwater system, and the turbine building. The audit team determined that the applicant's scoping methodology was generally consistent with the requirements of the Rule for the identification of SSCs that meet the scoping criteria of 10 CFR 54.4(a). However, the audit team determined that additional information was required in order for the staff to complete its review:

- The staff requested that the applicant provide a detailed description of the use of all component classification in the Systems, Applications and Products in Data Processing (SAP), including "SR" and "Q," that were used to identify safety-related systems to be included within the scope of license renewal or used to exclude systems from within the scope of license renewal.

- The staff requested that the applicant provide a detailed description of the process used to evaluate systems or components, identified as safety-related in SAP, and to conclude that the SAP component data module (CDM) classifications were conservative or incorrect and that the systems or components do not perform safety-related functions as defined in 10 CFR 54.4(a)(1).

IV. Screening Methodology

The audit team reviewed the methodology used by the applicant to determine if mechanical, structural, and electrical components within the scope of license renewal were subject to an AMR (screening). The applicant provided the audit team with a detailed discussion of the processes used for each discipline and provided administrative documentation that described the screening methodology. The audit team also reviewed the screening results reports for the chemical and volume control system, component cooling system, radioactive drain system, auxiliary feedwater system, and the turbine building. The audit team noted that the applicant's screening process was performed in accordance with its written requirements and was consistent with the guidance provided in the SRP-LR and NEI 95-10. The audit team determined that the screening methodology was consistent with the requirements of the Rule for the identification of SSCs that meet the screening criteria of 10 CFR 54.21(a)(1).

V. Aging Management Program Quality Assurance Attributes

The audit team reviewed the applicant's AMPs described in Appendix A, "Final Safety Analysis Report Supplement," and Appendix B, "Aging Management Programs," of the Salem LRA for

inclusion of the appropriate quality assurance (QA) requirements for Elements No. 7 (corrective action), No. 8 (confirmation process), and No. 9 (administrative controls). In addition, the audit team reviewed the AMP basis documents to ensure consistency in the use of the QA attributes for each program. The purpose of this review was to ensure that the aging management activities were consistent with the staff's guidance described in SRP-LR, Section A.2, "Quality Assurance for Aging Management Programs (Branch Technical Position IQMB-1)."

Based on the audit team's evaluation, the descriptions and applicability of the AMPs and their associated quality attributes, provided in Appendix A, Section A.1.5, "Quality Assurance Program and Administrative Controls," and Appendix B, Section B.1.3, "Quality Assurance Program and Administrative Controls," of the LRA, were determined to be generally consistent with the staff's position regarding QA for aging management.

VI. Quality Assurance Controls Applied to LRA Development

The staff reviewed the quality controls used by the applicant to ensure that scoping and screening methodologies used to develop the LRA were adequately implemented. The applicant used the following quality control processes during the LRA development:

- written procedures were developed to govern the implementation of the scoping and screening methodology
- scoping and screening summary reports and revisions were prepared, independently verified and approved
- process and procedure self-assessment was performed
- scoping and screening self-assessment was performed
- the license renewal project team performed a self-assessment
- the LRA was reviewed by the applicant's Challenge Board, the Plant Operations Review Committee and the Nuclear Safety Review Board
- the LRA was benchmarked relative to recent applications
- license renewal management and staff participate in NEI license renewal activities
- license renewal management and staff participate in external industry reviews

The audit team performed a sample review of reports and LRA development guidance, the applicant's documentation of the activities performed to assess the quality of the LRA, and held discussions with the applicant's license renewal personnel. The audit team determined that the applicant's activities provide assurance that LRA development activities were performed consistently with the applicant's license renewal program requirements.

VII. Training for License Renewal Project Personnel

The audit team reviewed the applicant's training process to ensure the guidelines and methodology for the scoping and screening activities were applied in a consistent and appropriate manner. The applicant required training for all personnel participating in the development of the LRA and used only trained and qualified personnel to prepare the scoping and screening implementing procedures and reports.

- license renewal staff received an initial qualification which consisted of training on the following topics:
  - license renewal process overview
  - license renewal project training and reference materials
  - relevant industry documents
- license renewal staff received additional classroom training on the following topics:
  - site document overview
  - systems and structures overview
  - system specific training
  - database training
- license renewal process overview training was conducted as department staff meetings

On the basis of discussions with the applicant's license renewal personnel responsible for the scoping and screening process, and a review of selected documentation in support of the process, the NRC audit team determined that the applicant's personnel understood the requirements and adequately implemented the scoping and screening methodology established in the applicant's renewal application.

VIII. Final Briefing

A final briefing was held with the applicant on January 22, 2010, to discuss the results of the scoping and screening methodology audit. The audit team identified preliminary areas where additional information would be required to support completion of the staff's LRA review.

IX. Documents Reviewed

1. NUREG-1800, "Standard Review Plan for Review of License Renewal Applications for Nuclear Power Plants," Revision 1
2. NEI 95-10, "Industry Guideline for Implementing the Requirements of 10 CFR Part 54 - The License Renewal Rule," Revision 6
3. LR-SH-1001, "License Renewal Process and Definitions"
4. LR-SH-1002, "Preparation of Basis Documents"
5. LR-SH-1003, "License Renewal Document Control"

6. LR-SH-1004, "Training of License Renewal Project Team and Site Personnel"

7. LR-SH-1005, "Scoping of Systems and Structures"

8. LR-SW-1006, "Screening of Systems, Structures and Commodities" SA-SSBD-A1, "10 CFR 54.4(a)(1) Safety-Related Systems Scoping and Screening Basis Document"

9. SA-SSBD-A2, "10 CFR 54.4(a)(2) System Scoping Criteria Scoping and Screening Basis Document"

10. SA-SSBD-AOT, "Abnormal Operational Transients Scoping and Screening Basis Document"

11. SA-SSBD-ATWS, "10 CFR 54.4(a)(3) ATWS Systems Scoping and Screening Basis Document"

12. SA-SSBD-EQ, "10 CFR 54.4(a)(3) Environmental Qualification Systems Scoping and Screening Basis Document"

13. SA-SSBD-FP, "10 CFR 54.4(a)(3) Fire Protection Systems Scoping and Screening Basis Document"

14. SA-SSBD-PTS, "10 CFR 54.4(a)(3) Pressurized Thermal Shock Scoping and Screening Basis Document"

15. SA-SSBD-SBO, "10 CFR 54.4(a)(3) Station Blackout Systems Scoping and Screening Basis Document"

16. SA-SSBD-SCRN, "Structures, Components and Commodity Types with Active, Passive Determinations and Intended Functions Scoping and Screening Basis Document"

17. SA-SSBD-SSL, "License Renewal Systems and Structures Scoping and Screening Basis Document"

X. NRC Audit Team Members

Bill Rogers	NRR/DLR
Jerry Dozier	NRR/DLR
Donnie Ashley	NRR/DLR
Donald Brittner	NRR/DLR
James Shea	NRR/DLR
Merrilee Banic	NRR/DLR
Rachel Voucher	NRR/DLR
Edward Smith	NRR/DSS

Evan Davison	NRR/DSS

XI. Applicant Personnel Contacted During Audit

Mike Gallagher	Vice President, Exelon (PSEG Consultant)
Jill Robinson	Executive Coordinator, Exelon (PSEG Consultant)
John Hufnagel	Salem and Hope Creek Licensing Lead, Exelon (PSEG Consultant)
Al Fulvio	License Renewal Manager, Exelon (PSEG Consultant)
John O'Rourke	Salem and Hope Creek Project Manager, Exelon (PSEG Consultant)
Albert Piha	Salem Technical Lead, Exelon (PSEG Consultant)
Don Warfel	Hope Creek Technical Lead, Exelon (PSEG Consultant)
Ali Fakhar	Manager License Renewal, Salem Site Lead, PSEG
Jim Stavely	Manager License Renewal, Hope Creek Site Lead, PSEG

If you have any questions, please contact me by telephone at 301-415-2981 or by e-mail at bennett.brady@nrc.gov.

Sincerely,

/RA/

Bennett M. Brady, Project Manager
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Division of License Renewal
Office of Nuclear Reactor Regulation

Docket Nos. 50-272 and 50-311

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