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In the Matter of:	Entergy Nuclear Operations, Inc. (Indian Point Nuclear Generating Units 2 and 3)
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SCOPING AND SCREENING METHODOLOGY AUDIT TRIP REPORT

Indian Point Nuclear Generating Unit Nos. 2 and 3

**Docket Nos.: 50-247
50-286**

SCOPING AND SCREENING METHODOLOGY AUDIT TRIP REPORT FOR THE ENTERGY NUCLEAR OPERATIONS, INC., LICENSE RENEWAL APPLICATION FOR THE INDIAN POINT GENERATING UNIT NOS. 2 AND 3

I. Introduction

During the week of October 8 - 12, 2007, the Division of License Renewal, Engineering Review Branch 2, performed an audit of the Entergy Nuclear Operations, Inc., (the applicant) license renewal scoping and screening methodology developed to support the license renewal application (LRA) for Indian Point Generating Units 2 and 3 (Indian Point). The audit was performed at the applicant's facility located outside Tarrytown, New York. The focus of the staff's audit was on 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. The audit team also reviewed quality attributes for aging management programs, quality practices used by the applicant to develop the LRA and training for personnel that developed the LRA.

II. Background

Title 10 of the *Code of Federal Regulations*, Part 54 (10 CFR Part 54), "Requirements for Renewal of Operating Licenses for Nuclear Power Plants," Section 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) that are subject to an aging management review (AMR) from the systems, structures, and components (SSCs) that are 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 screened to determine if they are long-lived, passive equipment that is subject to an aging management review in accordance with 10 CFR 54.21(a)(1).

III. Scoping Methodology

The scoping evaluations for the Indian Point LRA were performed by the applicant's license renewal project personnel. The audit team conducted detailed discussions with the applicant's license renewal project management 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 if the scoping results were consistent with current licensing basis requirements. The audit team also reviewed a sample of system scoping results for the following systems and structures: (1) service water system and (2) the turbine building (structural review). 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 applicant had included fluid-filled, nonsafety-related pipes located within a safety-related space within the scope of license renewal based on the spaces approach and had separately addressed nonsafety-related piping attached to safety-related SSCs. The staff requested that the applicant provide a description of the process used to ensure that fluid filled nonsafety-related pipe, attached to safety-related SSCs which exit the safety-

related space, was included within the scope of license renewal up to and including an appropriate seismic anchor, equivalent anchor or bounding condition, to the extent necessary to allow the staff to complete its safety review.

- During the NRC audit, the audit team reviewed the applicant's technical evaluation and on-site documentation for nonsafety-related SSCs affecting safety-related SSCs. This technical evaluation indicated that certain nonsafety-related SSCs affecting safety-related SSCs were not included within the scope of license renewal based on the proximity of the nonsafety-related SSCs to the safety-related SSCs. The staff requested that the applicant provide the rational and basis for not including nonsafety-related SSCs in the vicinity of safety-related SSCs within the scope of license renewal based on their proximity to safety-related SSCs.
- During the NRC audit, the audit team reviewed the applicant's technical evaluation and on-site documentation for nonsafety-related affecting safety-related SSCs which indicated that certain similar SSCs were included within the scope of license renewal in accordance with the requirements of 10 CFR 54.4(a)(1) for one unit and 10 CFR 54.4(a)(2) for the other unit. The staff requested that the applicant provide the rational and basis for including similar SSCs within the scope of license renewal in accordance with the requirements of 10 CFR 54.4(a)(1) for one unit and 10 CFR 54.4(a)(2) for the other unit.

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 would be subject to further aging management review. 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 service water 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 NUREG-1800, "Standard Review Plan for Review of License Renewal Applications for Nuclear Power Plants," Revision 1, (SRP-LR), and the Nuclear Energy Institute (NEI) 95-10, "Industry Guidelines for Implementing the Requirements of 10 CFR Part 54 - The License Renewal Rule," Revision 6, (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 aging management programs (AMPs) described in Appendix A, "Updated Final Safety Report Analysis Supplement," and Appendix B, "Aging Management Programs and Activities," of the Indian Point LRA for inclusion of the appropriate quality assurance requirements for elements No. 7 (corrective action), No. 8 (confirmation process) and No. 9 (administrative controls).

In addition, the audit team reviewed each individual AMP basis document to ensure consistency in the use of the quality assurance attributes for each program. The purpose of this review was to assure that the aging management activities were consistent with the staff's guidance

described in NUREG-1800, 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 plant-specific aging management programs (AMPs) and their associated quality attributes provided in Appendix A, Sections A.2.1 and A.3.1, and Appendix B, Section B.0.3, of the LRA were determined to be generally consistent with the staff's position regarding quality assurance for aging management.

VI. Quality Assurance Controls Applied to LRA Development

The audit team reviewed the quality controls used by the applicant to ensure that scoping and screening methodologies used in the LRA were adequately implemented. Although the applicant did not develop the LRA under a 10 CFR 50, Appendix B, QA program, the applicant applied the following quality assurance (QA) processes during the LRA development:

- The applicant developed written plans and procedures to direct implementation of the scoping and screening methodology, control LRA development, and describe training requirements and documentation.
- The applicant considered pertinent issues in previous license renewal applications and corresponding requests for additional information to determine the applicability to Indian Point application.
- The LRA was reviewed by industry peers and the site review committee prior to submittal to the NRC.

The audit team determined that, based on the review of reports and LRA development guidance, and a discussion with the applicant's license renewal personnel, the quality assurance activities met current regulatory requirements and provided additional assurance that LRA development activities were performed consistently with the applicant's LRA program requirements.

VII. Training for License Renewal Project Personnel

The audit team reviewed the applicant's training process for consistent and appropriate guidelines and methodology for the scoping and screening activities. As outlined in the project plan, the applicant required training and documentation for all personnel participating in the LRA development. Personnel were required to complete the training prior to preparing and approving implementation procedures. Training materials included the applicant's project guidelines; pertinent industry documents; 10 CFR Part 54 and its statement of considerations; NEI 95-10, Revision 6; Regulatory Guide 1.188, "Standard Format and Content for Applications to Renew Nuclear Power Plant Operating Licenses," Revision 1; SRP-LR; NUREG-1801, "Generic Aging Lessons Learned (GALL) Report," Revision 1; and attending an orientation session on license renewal.

The applicant's procedures specify two levels of training: (1) training for the corporate project team personnel and (2) training for site personnel. Generally the project team personnel reviewed all of the training documents in order to thoroughly comprehend those documents directly related to their specific scoping and screening responsibilities. Training for the site personnel was performed to ensure an understanding of the license renewal process and of

materials specifically related to each individual's license renewal responsibilities. Completion of the training allowed site personnel to evaluate and approve the license renewal documents for technical accuracy. Qualification and training records and a check list served as documentation for each individual's completed license renewal training. The audit team reviewed completed qualification and training records and completed check lists for several of the applicant's license renewal personnel.

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 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 October 12, 2007, 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. IP-RPT-05-LRP01, "License Renewal Project Plan"
4. IPEC-LRPG-03, "System and Structure Scoping"
5. IPEC-LRPG-04, "Mechanical System Screening and Aging Management Review"
6. IPEC-LRPG-05, "Electrical System Screening and Aging Management Review"
7. IPEC-LRPG-04, "Structural Screening and Aging Management Review"
8. IPEC-LRPG-06, "Structural Scoping and Screening and Aging Management Reviews"
9. IP-RPT-06-LRD01, "System & Structure Scoping Results"
10. ENN-MS-S-009-IP2, "IP1/IP2 System Safety Function Sheets"
11. ENN-MS-009-IP3, "IP3 System Safety Function Sheets"
12. IP-RPT-005-00071, "IP2 10 CFR 50, Appendix R Safe-Shutdown Separation Analysis"
13. IP-RPT-06-AMC01, "Aging Management Review of the Containment Buildings"
14. IP-RPT-06-AMC02, "Aging Management Review of the Water Control Structures"

15. IP-RPT-06-AMC03, "Aging Management Review of the Turbine Buildings, Auxiliary Buildings, and Other Structures"
16. IP-RPT-06-AMC04, "Aging Management Review of Bulk Commodities"
17. AMM-30, "Nonsafety Affecting Safety"

X. Personnel Contacted During Methodology Audit

1. Robert Walpole, Entergy Nuclear Operations, Inc., (Entergy), Manager Licensing
2. Gary Young, Entergy, Manager, License Renewal
3. Patric Conroy, Entergy – Director NSA
4. Mike Stroud, Entergy, Project Manager
5. Ted Ivy, Entergy- License Renewal
6. Tom McCaffrey, Entergy – Design Engineering
7. Don Mayer, Entergy – Director VI
8. Charlie Caputo, Entergy – License Renewal Team
9. Bill Josego, Entergy – License Renewal Team
10. Reza Ahrable, Entergy – License Renewal Team
11. Roger Rucker, Entergy – License Renewal Team
12. Brian Adkison, Entergy – License Renewal Team
13. Jill Brochu, Entergy – License Renewal Team
14. David Lach, Entergy – License Renewal Team
15. Jacque Lingenfelter, Entergy – License Renewal Team
16. Don Fronabarger, Entergy – License Renewal Team