



UNITED STATES
NUCLEAR REGULATORY COMMISSION
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September 6, 2011

Mr. G.T. Powell, Vice President
Technical Support and Oversight
STP Nuclear Operating Company
P.O. Box 289
Wadsworth, TX 77483

SUBJECT: SCOPING AND SCREENING AUDIT REPORT REGARDING THE SOUTH
TEXAS PROJECT, UNITS 1 AND 2 (TAC NOS. ME4936 AND ME4937)

Dear Mr. Powell:

By letter dated October 25, 2010, STP Nuclear Operating Company submitted a license renewal application (LRA) for renewal of operating licenses NPF-76 and NPF-80 for the South Texas Project (STP) Units 1 and 2. On May 19, 2011, the staff of the U.S. Nuclear Regulatory Commission completed the on-site Scoping and Screening Audit of the STP LRA. The audit report is enclosed.

If you have any questions, please contact me by telephone at (301) 415-3873 or by e-mail at john.daily@nrc.gov.

Sincerely,

A handwritten signature in black ink, reading "John W. Daily".

John W. Daily, Senior Project Manager
Reactor Projects Branch 1
Division of License Renewal
Office of Nuclear Reactor Regulation

Docket Nos. 50-498 and 50-499

Enclosure:
As stated

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U.S. NUCLEAR REGULATORY COMMISSION

OFFICE OF NUCLEAR REACTOR REGULATION, DIVISION OF LICENSE RENEWAL

Docket Nos: 50-498 and 50-499

License Nos: NPF-76 and NPF-80

Licensee: STP Nuclear Operating Company

Facility: South Texas Project, Units 1 and 2

Location: P.O. Box 289
Wadsworth, TX 77483

Dates: May 15 – 19, 2011

Lead Auditor: Bill Rogers, RASB
Division of License Renewal

Reviewers: As stated in enclosure

Approved By: Rajender Auluck, Chief, RASB
Division of License Renewal

ENCLOSURE

SCOPING AND SCREENING METHODOLOGY TRIP REPORT FOR THE SOUTH TEXAS PROJECT LICENSE RENEWAL APPLICATION

I. Introduction

During the week of May 16, 2011, the Division of License Renewal, Engineering Review Branch 2, performed an audit of the STP Nuclear Operating Company (STPNOC or the applicant) license renewal scoping and screening methodology developed to support the license renewal application (LRA) for South Texas Project (STP) Electric Generating Station Units 1 and 2. The audit was performed at the applicant's facility located in south-central Matagorda, southwest of Houston. The focus of the U.S. Nuclear Regulatory Commission's (NRC or the staff) 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 quality attributes for 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 (10 CFR Part 54), "Requirements for Renewal of Operating Licenses for Nuclear Power Plants," and NUREG-1800, "Standard Review Plan for Review of License Renewal Applications for Nuclear Power Plants," Revision 2 (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 Part 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 STP 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 conducted a review of a sample of eighty-five components from the applicant's Master Equipment Database that were determined by the applicant as not 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 Updated Final Safety Analysis Report (UFSAR), system information and piping and instrumentation drawings to perform its review. The audit team did not identify any components that had been inappropriately excluded from the scope of license renewal during the sample review.

The audit team also reviewed a sample of system scoping results for the following systems and structures: auxiliary feedwater, essential chilled water/HVAC, essential cooling water, emergency diesel generators, 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 determined, through a review of the license renewal implementing documents and discussions with the applicant, that a quality class, "QC-4," had been used in identifying SSCs to be included within the scope of license renewal in accordance with 10 CFR 54.4(a)(1) that was not addressed in the license renewal application.

The staff determined that the method used to address the potential for nonsafety-related SSCs to impact safety-related SSCs located in the turbine building as provided during discussions with the applicant, was different than the method provided in the LRA and the applicant's implementing documents. The staff performed a plant walkdown of the safety-related SSCs located in the turbine building (feedwater regulating control valves' associated air solenoid valves and limit switches) and determined that there were nonsafety-related SSCs located within the vicinity of the safety-related SSCs. The LRA and the applicant's implementing documents stated that nonsafety-related piping and structures that could potentially interact with the safety-related solenoid valves and limit switches were included within the scope of license renewal in accordance with 10 CFR 54.4 (a)(2). However, during audit discussions with the staff, the applicant stated that the safety-related solenoid valves and limit switches were qualified to withstand the effects of the failure of nonsafety-related SSCs within the vicinity of the safety-related SSCs and, therefore, the nonsafety-related SSCs were not included within the scope of license renewal in accordance with 10 CFR 54.4 (a)(2).

The staff determined that the applicant had not completed the review and submitted the information to the NRC, identifying all nonsafety-related SSCs to be included within the scope of license renewal. The staff determined that the applicant had performed a plant walkdown in April 2011, subsequent to the submittal of the LRA, during which the applicant identified additional SSCs to be included within the scope of license of renewal in accordance with 10 CFR 54.4 (a)(2).

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 an AMR (screening). The applicant provided the audit team with a detailed discussion of the processes used for each discipline and discussed Project Instruction PI-1, "Scoping and

Screening of Systems, Structures, and Components.” The applicant used the auxiliary feedwater system and turbine building as examples in their scoping and screening presentations. The audit team also reviewed the screening reports for the auxiliary feedwater, essential chilled water/HVAC, essential cooling water, emergency diesel generators, 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 STP 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). The team also reviewed the applicant’s “Program Evaluation Report B1.3 – Quality Assurance for Aging Management Programs,” which describes how the existing STP quality assurance program includes the QA-related elements (corrective action, confirmation process, and administrative controls) and a sample of Program Evaluation Reports for AMPs described in Appendix B of the LRA. The team confirmed that the AMP reports addressed the three QA elements as described in Program Evaluation Report B1.3 and that the approach is 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 the STP LRA Appendix A, Section A.1, “Summary Descriptions of Aging Management Programs and Activities,” and Appendix B, Section B.1.3, “Quality Assurance Program and Administrative Controls,” were determined to be generally consistent with the staff’s position regarding QA for aging management.

VI. Quality Assurance Controls Applied to LRA Development

STP license renewal staff and STARS Plant Aging Management Center of Business (PAMCOB) staff performed scoping and screening and LRA development activities. The PAMCOB staff is composed of member utility personnel and contractor personnel, which have performed license renewal activities for several other licensees. PAMCOB has a quality assurance program that includes corrective action and lessons learned processes.

Controls applied to the license renewal activities related to quality assurance included:

- Performing scoping and screening activities using PAMCOB PI-1, “Scoping and Screening of Systems, Structures, and Components.”
 - Desktop Guide documents provided additional guidance such as use of the License Renewal Data Management Tool (LRDMT), document control, boundary drawings, spatial interaction and structural integrity evaluations, and plant walkdowns.

- PAMCOB staff consulted with STP license renewal staff when clarification of available documentation or validation was needed.
 - The LRDMT was used to guide and record scoping and screening evaluations and to generate license renewal documents.
 - The controlled Master Equipment Database provided the initial information for the LRDMT. The LRDMT was continuously available to both STP and PAMCOB license renewal personnel.
 - PI-1 included provisions to identify errors in CLB and other documentation and to initiate corrective actions.
- PAMCOB staff prepared and performed checks of scoping and screening documents.
 - The STP License Renewal discipline leads and License Renewal project manager reviewed and approved scoping and screening documents after comment resolution by PAMCOB.
 - PAMCOB staff prepared the draft LRA.
 - LRA reviews were performed by
 - STP license renewal team
 - STP subject matter experts
 - STP senior management
 - Additional LRA oversight was provided through
 - an industry peer review
 - quality assessment
 - industry expert reviews
 - industry lessons learned

The audit team performed a sample review of reports and LRA development procedures, 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 and contractor PAMCOB training processes to ensure the guidelines and methodology for the scoping and screening activities were applied in a consistent and appropriate manner.

- PAMCOB personnel were trained to the applicable Project Instructions and Desktop Guides according to their functions.

- STP license renewal and subject matter expert training included:
 - LRA overview and Integrated Plant Assessment fundamentals
 - LRDMT training for reviewers
 - Direct knowledge transfer with PAMCOB personnel
 - Participation in a readiness review
- The STP license renewal project manager had been a PAMCOB participant for three years and had received required PAMCOB training

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 applicant license renewal and PAMCOB 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 May 19, 2011, 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 2
2. NEI 95-10, "Industry Guideline for Implementing the Requirements of 10 CFR Part 54 The License Renewal Rule," Revision 6
3. License Renewal Application - South Texas Project Unit 1 and Unit 2
4. South Texas Project Aging Management Program Evaluation Report B1.3 – Quality Assurance for Aging Management Programs
5. TR-1ST Anticipated Transients Without Scram Position Paper
6. TR-2ST Station Blackout Topical Report
7. TR-3ST Fire Protection Position Paper
8. TR-4ST Environmental Qualification (EQ) Position Paper
9. TR-5ST Pressurized Thermal Shock Position Paper
10. TR-6ST Criteria (a)(2) Position Paper
11. TR-7ST Electrical Position Paper
12. TR-8ST Aging Effects Position Paper

- 13. TR-9ST Plant Systems and AMPs Topical Report
- 14. PAMCOB Project Instruction PI-1 Scoping and Screening of SSCs
- 15. System and Structure Scoping Reports (various)
- 16. Component Summary Screening Reports (various)
- 17. License Renewal Boundary Drawings (various)
- 18. STP Updated Final Safety Analysis Report (UFSAR) Revision 15
- 19. PAMCOB Desktop Guides (various)

X. NRC Audit Team Members

Raj Auluck	NRR/DLR
Bill Rogers	NRR/DLR
Angela Buford	NRR/DLR
Stacie Sakai	NRR/DLR
Donald Brittner	NRR/DLR
Mark Yoo	NRR/DLR
Edward Smith	NRR/DSS
Gary Armstrong, Jr.	NRR/DSS
Lane Howard	DLR Contractor Southwest Research Institute
Robert Brient	DLR Contractor Southwest Research Institute
James Nickolaus	DSS Contractor Pacific Northwest National Laboratory

XI. Applicant Personnel Contacted During Audit**STP:**

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Ken Taplett

Chet McIntyre

Duane Etheridge

Melissa Simons

Wendy Hoffman

Sandy Meyerdirk

Gerald Powell

PAMCOB:

Gary Warner

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Jim Johnson

Al Saunders

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Sincerely,

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John W. Daily, Senior Project Manager
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Division of License Renewal
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*Concurrence via e-mail

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DATE	08/19/2011	08/23/2011	08/06/2011	08/06/2011	08/06/2011

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Letter to G.T. Powell from John W. Daily dated September 6, 2011

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