



South Texas Project Electric Generating Station P.O. Box 289 Wadsworth, Texas 77483

June 23, 2011
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U. S. Nuclear Regulatory Commission
Attention: Document Control Desk
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11555 Rockville Pike
Rockville, MD 20852-2746

South Texas Project
Units 1 and 2
Docket Nos. STN 50-498, STN 50-499
Response to Request for Additional Information for the
South Texas Project License Renewal Application (TAC Nos. ME4936 and ME4937)

- Reference:
1. STPNOC Letter dated October 25, 2010, from G. T. Powell to NRC Document Control Desk, "License Renewal Application", (NOC-AE-10002607) (ML103010257)
 2. NRC letter dated May 24, 2011, "Request for Additional Information for the Review of the South Texas Project, Units 1 and 2, License Renewal Application – Future Consideration of Operating Experience (ML11137A092)

By Reference 1, STP Nuclear Operating Company (STPNOC) submitted the License Renewal Application (LRA) for South Texas Project (STP) Units 1 and 2. By Reference 2, the NRC staff requested additional information for the review of the STP LRA. STPNOC's response to the request for additional information is included in Enclosure 1 to this letter.

Enclosure 2 provides a revision to STP LRA Licensing Commitment #29. There are no other regulatory commitments in this letter.

Should you have any questions regarding this letter, please contact either Arden Aldridge, STP License Renewal Project Lead, at (361) 972-8243 or Ken Taplett, STP License Renewal Project regulatory point-of-contact, at (361) 972-8416.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on June 23, 2011.
Date

G. T. Powell
Vice President,
Technical Support & Oversight

KJT

- Enclosure 1: STPNOC Response to Request for Additional Information
Enclosure 2: Revised LRA Licensing Commitment

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Enclosure 1

STPNOC Response to Request for Additional Information

STPNOC Response to Request for Additional Information

RAI B1.4-1

Background:

Pursuant to 10 CFR 54.21 (a)(3), a license renewal applicant is required to demonstrate that the effects of aging on structures and components subject to an aging management review are adequately managed so that their intended functions will be maintained consistent with the current licensing basis for the period of extended operation. Section 3.0.1 of NUREG-1800, "Standard Review Plan for Review of License Renewal Applications for Nuclear Power Plants," Revision 2 (SRP-LR), defines an aging management review as the identification of the materials, environments, aging effects, and aging management programs (AMPs) credited for managing the aging effects. In turn, SRP-LR Section A.1.2.3 defines an acceptable AMP as consisting of ten elements. Element 10, "Operating Experience," in part, is described in SRP-LR Section A.1.2.3.10, paragraph 1, as follows:

Consideration of future plant-specific and industry operating experience relating to aging management programs should be discussed. Reviews of operating experience by the applicant in the future may identify areas where aging management programs should be enhanced or new programs developed. An applicant should commit to a *future review of plant-specific and industry operating experience to confirm the effectiveness of its aging management programs or indicate a need to develop new aging management programs* (emphasis added). This information should provide objective evidence to support the conclusion that the effects of aging will be managed adequately so that the structure and component intended function(s) will be maintained during the period of extended operation.

In addition, 10 CFR 54.21 (d) requires the application to contain a final safety analysis report (FSAR) supplement. This supplement must contain a summary description of the programs and activities for managing the effects of aging and the evaluation of time-limited aging analyses for the period of extended operation.

Based on its review of the South Texas Project. Units 1 and 2, license renewal application (LRA), the staff determined that Section B1.4 provides a general description of how the applicant gathered and considered operating experience in preparing its LRA, and Sections B2.1.1 through B2.1.37 and B3.1 through B3.3 summarize the specific operating experience considered for each AMP.

Issue:

Although LRA Sections B1.4, B2.1.1 through B2.1.37, and B3.1 through B3.3 describe how the applicant incorporated operating experience into its AMPs, they do not fully describe how the applicant will use future operating experience to ensure that the AMPs will remain effective for managing the aging effects during the period of extended operation. The main focus of these LRA sections is on how the applicant evaluated operating experience available at the time the

application was prepared to justify the adequacy of its proposed AMPs. Some of the program descriptions, particularly those for new programs, contain statements indicating that future plant-specific and industry operating experience will be used to adjust the programs as appropriate. However, for the majority of the AMPs, it is not clear whether the applicant currently has or intends to implement actions to monitor operating experience on an ongoing basis and use it to ensure the continued effectiveness of the AMPs. The LRA also does not state whether new AMPs will be developed, as necessary. Further, the majority of the AMP descriptions do not provide the staff reasonable assurance that ongoing operating experience reviews will continue to inform AMP updates for license renewal.

Request:

Describe the programmatic activities that will be used to continually identify aging issues, evaluate them, and, as necessary, enhance the AMPs or develop new AMPs for license renewal. In this description, address the following:

- Describe the sources of plant-specific and industry operating experience that are monitored on an ongoing basis to identify potential aging issues. Indicate whether these plant-specific sources require monitoring: corrective action program, system health reports, licensee event reports (LERs), and the results of inspections performed under the AMPs. Similarly, indicate whether these industry sources require monitoring: vendor recommendations, revisions to industry standards on which the AMPs are based, LERs from other plants, NRC Bulletins, Generic Letters, Regulatory Issue Summaries, Information Notices, Regulatory Guides, License Renewal Interim Staff Guidance, and revisions to NUREG-1801, "Generic Aging Lessons Learned (GALL) Report." Describe the criteria used to classify a particular piece of information as aging related and outline the training provided to plant personnel so that they can adequately make such classifications.
- Describe how the identified aging issues are further evaluated to determine their potential impact on the plant aging management activities. Indicate whether the affected structures and components and their materials, environments, aging effects, aging mechanisms, and AMPs are identified and documented consistent with the methods used to prepare the LRA. Describe how the results of AMP inspections are considered to adjust the frequency of future inspections, establish new inspections, and ensure an adequate depth and breadth of component, material, environment, and aging effect combinations. Describe the records of these evaluations and indicate whether they are maintained in an auditable and retrievable form.
- Describe the process and criteria used to ensure that the identified enhancements are implemented in a timely manner.
- Describe the administrative controls over these programmatic activities.

Provide a summary description of these activities for the FSAR supplement required by 10 CFR 54.21(d). If enhancements for license renewal are necessary, also provide the updates for the FSAR supplement.

If such an operating experience program is determined to be unnecessary, provide a detailed explanation of the bases for this determination.

STPNOC Response :

STPNOC concurs that plant-specific and industry operating experience should be continuously reviewed to confirm the effectiveness of aging management programs and be utilized as needed to develop new aging management programs in order to adequately manage the effects of aging so that the intended function(s) of structures and components are met.

Operating Experience and Corrective Action Programs

The South Texas Project (STP) process maintains procedures for feedback of operating information, including aging related issues, pursuant to NUREG-0737, item I.C.5., *Procedures for Feedback of Operating Experience*, (STP Updated FSAR Section 13.5.1.3.1.i.). This process provides for the systematic evaluation of significant nuclear plant operating experiences, incorporation of lessons learned into appropriate plant practices, policies, programs, and procedures, with the objective of preventing similar issues; and sharing of lessons learned internally and with other utilities to promote industry-wide safety and reliability. The STP Operating Experience Program is consistent with the guidance contained in the Institute of Nuclear Power Operations (INPO) 97-011, *Guidelines for the Use of Operating Experience*, and INPO 10-006, *Operating Experience/Construction Experience Program*.

The STP Corrective Action Program (CAP) complements the STP Operating Experience (OE) Program to monitor aging-related issues. Attributes of the STP CAP are described in Section B1.3 of the License Renewal Application. The CAP provides a process to ensure that a broad range of issues or conditions can be documented and coded to enable trending for the purpose of addressing broader programmatic or process weaknesses. Conditions adverse to quality are identified, classified regarding significance, and reported to the appropriate level of management. The cause of the condition is determined and subsequently corrected. The CAP implements the requirements of 10 CFR 50, Appendix B, Criterion XVI. As such, the CAP is used to monitor plant-specific OE and industry OE that is relevant to STP.

The operating experience summary in each aging management program described in the STP License Renewal Application identifies past corrective actions and provides objective evidence that the effects of aging have been, and will continue to be, adequately managed so that the intended functions of the structures and components within the scope of each program will be maintained during the period of extended operation.

The following sources of plant-specific and industry operating experience are examples that are monitored on an ongoing basis to identify potential aging issues and placed in CAP, as appropriate.

- Conditions adverse to quality including
 - Input from plant-specific Licensee Event Reports (LER)
 - Adverse results of inspections performed under the STP Aging Management Programs (AMP)

- Identification of age related equipment failures in apparent and root cause investigations. These investigations include identifying any organizational and program weaknesses.
- System health reports including trending
- INPO operating experience reports including
 - Operating Experience Event Reports
 - Operating Experience Digests
 - Consolidated Operating Experience (EPIX)
- Vendor recommendations
- Electric Power Research Institute (EPRI) Preventive Maintenance PM Templates used to establish PMs which include age related failure modes
- STP Life Cycle Management Studies
- Equipment Owners Group (e.g. Westinghouse, Cooper Bessemer)
- Nuclear Regulatory Commission (NRC) Generic Communications
 - NRC Bulletins
 - NRC Generic Letters
 - NRC Regulatory Issue Summaries
 - NRC Information Notices

The results of the monitoring of the above sources of operating experience information are documented and maintained in accordance with plant records management and administration procedures.

The following sources of information are not reviewed in the STP OE Program.

- Information from LERs from other plants is not directly reviewed as part of the STP OE Program. INPO evaluates this type of information for input into their Event Reports. The STP OE Program reviews INPO Event Reports, as stated above.
- NRC Regulatory Guides, License Renewal Interim Staff Guidance, revisions to NUREG-1801, and revisions to industry standards, on which the AMPs are based, are not reviewed under the OE Program. These documents contain information that is based on information in other OE documents discussed above that are reviewed under the STP OE Program.

In addition, the equipment reliability process represents the integration and coordination of a broad range of equipment reliability activities into one process for plant personnel to evaluate important station equipment, develop and implement a long-term maintenance plan, monitor equipment performance, and make continuing adjustments to tasks and frequencies based on equipment operating experience. This process includes systems, structures, and components within the scope of License Renewal and address the use of plant-specific and industry OE. The process performs system component failure and problem trending using maintenance history, CAP data, and OE Program data to adjust tasks or frequencies. Consideration is given to what other components are susceptible to the failure mechanism.

AMP owners are selected based on educational background and experience. Engineering support personnel have been trained on the Equipment Reliability Process which includes age related inputs. Engineering personnel have also been trained on the EPRI Aging Assessment Field Guide (Report 1007933).

Future evaluation of operating experience

As additional industry and plant-specific applicable operating experience becomes available, it will be evaluated and incorporated into each aging management program or in the development of a new aging management program(s), as necessary, to provide assurance that the effects of aging will be managed during the period of extended operation. See Enclosure 2 for revised LRA Licensing Commitment #29.

Administration

- The South Texas Project Licensing Commitment Management and Administration procedure ensures that the identified enhancements (i.e. revised LRA Licensing Commitment #29 in Enclosure 2) are implemented in a timely manner.
- The administrative controls over these programmatic activities are described in Section B1.3 of the STP Units 1 and 2, LRA.
- Records of evaluations to enhance or develop programs are maintained in an auditable and retrievable form.

Final Safety Analysis Report Supplement

10 CFR 54.21(d) requires that the FSAR be supplemented with a summary description of the programs and activities to manage the effects of aging. These are the aging management programs and activities described in Section A1 and A2 of the LRA. In SRP-LR Section A.1.2.3, the NRC acknowledges that operating experience is only one element of a 10 element AMP.

If enhancements for license renewal are necessary, the STP FSAR will be supplemented, as appropriate, pursuant to the requirements of 10 CFR 50.71(e).

STP does not intend to supplement our FSAR beyond what is currently required by regulation for license renewal. In addition, STP Licensing Commitment #29 has committed to the NRC to perform future reviews of plant-specific and industry operating experience for AMPs. The STP Licensing Commitment Management and Administration process is consistent with the guidance of Nuclear Energy Institute, *Guideline for Managing NRC Commitments*, NEI 99-04. This is an appropriate process for managing regulatory commitments.

Enclosure 2:

Revised LRA Licensing Commitment

Table A4-1 License Renewal Commitments

Item #	Commitment	LRA Section	Implementation Schedule
29	<p>As additional industry and plant-specific applicable operating experience becomes available, it will be evaluated and incorporated into each new program through the STP condition reporting and operating experience programs.</p> <p>As additional industry and plant-specific applicable operating experience becomes available, it will be evaluated and incorporated into each aging management program or in the development of a new aging management program(s), as necessary, to provide assurance that the effects of aging will be managed during the period of extended operation.</p>	<p>B2.1.16 B2.1.17 B2.1.19 B2.1.20 B2.1.22 B2.1.24 B2.1.35 B2.1.36 B1.4</p>	<p>Prior to the period of extended operation.</p> <p>Within ten years prior to entering the period of extended operation.</p>