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U. S. Nuclear Regulatory Commission
Document Control Desk
Washington, D. C. 20555

ATTN: : Rules Review and Directives Branch

Comments on
Draft Regulatory Guide DG-1047 "Standard Format and Content for Applications to Renew Nuclear Power Plant Operating Licenses"
(61 Federal Register 43792 dated August 26, 1996)

Dear Sir:

Southern Nuclear Operating Company (SNC) has reviewed the draft Regulatory Guide DG-1047 "Standard Format and Content for Applications to Renew Nuclear Power Plant Operating Licenses," published in the Federal Register on August 26, 1996. In accordance with request for comments, SNC is in total agreement with the NEI comments which are to be provided to the NRC.

In general, SNC commends the NRC in its aggressive development of the guidelines in conjunction with NEI. However, SNC has concerns that the current implementation environment for the renewal rule may not result in the stable, efficient and predictable process envisioned. Thus, SNC is enclosing additional comments which recommend changes to the Regulatory Guide and NEI Guideline to clarify the implementation requirements for Applications to Renew Nuclear Power Plant Operating Licenses.

Should you have any questions, please advise.

Respectfully submitted,

DM Morey

Dave Morey

DNM/*JTD*
Enclosure

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(61FR43792)

TICP-11 Guides & Documents
X IEP-11 Comments

cc: Southern Nuclear Operating Company
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U. S. Nuclear Regulatory Commission, Washington, DC
J. I. Zimmerman, Licensing Project Manager, NRR

U. S. Nuclear Regulatory Commission, Region II
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Enclosure

Comments on the Draft Regulatory Guide DG-1047
"Standard Format and Content for Applications to Renew Nuclear Power Plant Operating Licenses"

Southern Nuclear (SNC) is submitting the following comments for consideration on the Draft Regulatory Guide DG 1047 and the Nuclear Energy Institute NEI 95-10 Revision 0, *Industry Guideline for Implementing the Requirements of 10 CFR Part 54- The License Renewal Rule* which is being endorsed by DG-1047.

This enclosure recommends changes to selected sections of NEI 95-10. As an administrative matter, SNC recognizes that these comments, if accepted, can be incorporated into NEI 95-10 or within the regulatory guide, as appropriate.

Draft Regulatory Guide DG-1047 Comments.

Section 2 endorses NEI 95-10, Revision 0, but with the following qualifier: "The examples should not be considered sufficient for demonstrating that the effects of aging for the components discussed will be adequately managed for the period of extended operation." Either the Regulatory Guide should provide examples that the NRC deems adequate for demonstrating that the program is managing aging effects or NEI 95-10 should be revised to include acceptable examples.

Section 3.1 on "Matters Not Subject to a Renewal Review" states "Conversely, 10 CFR 54.30 does not support the position that, because aging is a continuous process, aging management being performed on structures and components within the scope of license renewal during the current term is acceptable for the period of extended operation. The demonstrations required by the license renewal rule must still be provided for these aging management programs." Southern Nuclear agrees that the demonstration must be made for programs that manage aging. This wording implies that programs in the current term are presumed inadequate until proven to be otherwise. The sentences should be revised as follows:

"Section 54.30 does support the position that, because aging is a continuous process, aging management being performed on structures and components within the scope of license renewal during the current term may be acceptable for the period of extended

operation. However, the demonstration required by the license renewal rule must still be provided for these aging management programs."

Nuclear Energy Institute NEI 95-10, Revision 0, Comments

Section 2.0 "Overview of Part 54" requires clarification.

Based on Southern Nuclear's participation in the NEI License Renewal Working Group, the License Renewal Demonstration Program (LRDP), and our involvement with other license renewal industry efforts, it appears that the NRC staff has imposed a "new" standard in the implementation of NEI 95-10. This different standard, presumably, relates to some change in the "burden of proof" imposed on the licensee in order to provide reasonable assurance as specified in 10 CFR 54.29.

The staff has, on several occasions during the LRDP and during meetings that discussed license renewal (LR), stated that there is a new standard for establishing reasonable assurance for the renewal term that is different from the standard in the current term. However, Southern Nuclear does not believe that there is a new standard for the renewal term. If there is a new standard, it needs to be clearly defined in Section 2.0 of NEI 95-10. Such a standard is an important foundation upon which the rest of NEI 95-10 should be based. Southern Nuclear recognizes that any new regulation brings with it new requirements. The issue is whether the new requirements constitute a new standard that would imply that some programs considered acceptable in the current term to manage a specific aging effect are not considered acceptable in the renewal term to manage the same aging effect. Southern Nuclear does not believe that the regulatory basis for the acceptance of programs should be any different in the renewal term than in the current term. If a program designed to specifically manage certain aging effects is found to be acceptable in the current term the program should also be considered acceptable for managing the same aging effect in the period of extended operation.

Consequently, Southern Nuclear proposes that, the language of Section 2.0 be revised to clearly state, based on the appropriate sections of the SOC, that the license renewal process does not involve a new standard for providing the reasonable assurance required in 10 CFR 54.29.

The following comments expand on, and provide background for the above proposal:

> In the current term, a licensee may develop many programs to manage aging effects using a qualitative approach. These programs could include performance monitoring programs which monitor for overall functionality. However, for renewal programs, the NRC staff has said that they require "proof" using quantifiable data which

establishes "objective evidence" that programs manage aging consistent with the CLB. This requirement for "proof" tends to ignore the NRC regulatory oversight process that continues into the period of extended operation, as sanctioned by the SOC at 60 FR 22475.

In developing the original rule, the NRC determined, in NUREG-1412, that the Commission's "regulatory oversight programs ensure that the licensing basis is modified as appropriate to reflect significant new information on technical topics, including the effects of age-related degradation affecting the design or operation of the licensed plant so that the licensing basis continues to provide an acceptable level of safety." Thus, new programs are currently being incorporated into the licensing basis, when appropriate, which reflect the result of NRC's regulatory oversight process. For the period of extended operation, the "Commission has concluded that existing programs and regulatory requirements that continue to be applicable in the period of extended operation and provide adequate aging management for systems, structures, and components should be credited for license renewal. Accordingly, the amendment to the license renewal rule focuses the renewal review on plant systems, structures, and components for which current activities and requirements may not be sufficient to manage the effects of aging in the period of extended operation" (60 FR 22469). The SOC continues to develop a discussion regarding the implementation of the maintenance rule and the adequacy of the regulatory process to manage aging effects, with a conclusion for active components, at 60 FR 22471, that "...the Commission believes that with the additional experience it has gained with age-related degradation reviews and with the implementation of the maintenance rule, there is a sufficient basis for concluding that current licensee programs and activities, along with the regulatory process, will be adequate to manage the effects of aging on the active functions of all systems, structures, and components within the scope of license renewal during the period of extended operation so that the CLB will be maintained." The SOC continues, at 60 FR 22474, to develop the focus of the rule on maintaining the function of systems, structures, and components, with discussion of two key issues considered by the Commission in developing the final rule:

1. "...whether or not a focus on ensuring a system's, structure's or component's function through performance or condition monitoring is a sufficient basis for concluding that the CLB will be maintained throughout the period of extended operation," and
2. "...whether the regulatory process and a focus on functionality during the license renewal review for the period of extended operation are sufficient to provide reasonable assurance that an acceptable level of safety (i.e., the CLB) will be maintained."

The ensuing discussion then ended at 60 FR 22475, with "...the Commission concludes that a specific focus on functionality is appropriate for performing the license renewal review. Reasonable assurance that the function of important systems, structures, and components will be maintained throughout the renewal period,

> combined with the rule's stipulation that all aspects of a plant's CLB (e.g., technical specifications) and the NRC's regulatory process carry forward into the renewal period, are viewed as sufficient to conclude that the CLB (which represents an acceptable level of safety) will be maintained."

Southern Nuclear believes the continuing themes throughout the SOC discussions of focus on functionality and continuation of the NRC's regulatory process emphasize the Commission's intent that the same standard for determining reasonable assurance that exists in the current term continues into the period of extended operation. It follows then that aging management programs which are specifically designed to manage aging effects in the current term should continue to provide a reasonable assurance of safety in the period of extended operation. Thus, as stated above, Southern Nuclear proposes that section 2.0 of NEI 95-10 be revised to explicitly state the intent of the rule, as concluded at 60 FR22475 (see above).

Section 3.3 "Documenting the Scoping Process" should be revised to provide flexibility on the QA Program used to document the scoping. The following sentence should be changed from:

"The applicant should use the quality assurance program in effect at the plant when documenting the results of the scoping process."

to:

"A 10 CFR 50 Appendix B approved quality assurance program should be used to document the results of the scoping process.."

Within the structure of a nuclear utility, there may be several QA programs. Plant and corporate may have separate QA programs and contractors may have separate QA programs. License renewal activities may be conducted within any approved QA program.

Section 4.1 "Identification of Structures and Components Subject to an Aging Management Review and Intended Functions" should be revised to clarify the types of equipment lists which are required to be developed and maintained by the applicant. Specifically, the guideline should expand on the definition and intended use of commodity groupings in fulfilling the intent of the Rule.

Add the following sentences at the end of Section 4.1:

"Commodity groupings may consist of items such as cable, terminations, cable tray supports, pipe supports, etc., which are of the same type of construction and are subject to the same types of environmental stress and aging effects in the plant. A commodity group may be considered one element in the list of structures and components subject to an aging management review."

This principle is employed in other areas such as environmental qualification, where cables are grouped according to manufacturer and model, and qualification is established for all plant cables in the group which are subject to similar environments. The SOC at 60 FR 22466, endorses this concept of commodity groupings, which states that "Licensees may rely upon their listing of 10 CFR 50.49 equipment, as required by 10 CFR 50.49(d), for the purposes satisfying 10 CFR 54.4 with respect to equipment within the scope of 10 CFR 50.49."

Section 4.2.1.3 "Demonstration That the Effects of Aging Are Managed" should be revised to clarify the recommended elements for an appropriate review checklist.

The following element should be revised from:

"The aging effect(s) are detected by one or more of the credited programs before there is a loss of the structure's or component's intended function."

to:

"The aging effect(s) are detected by one or more of the credited programs before there is a degradation of the structure's or component's intended function such that the system's intended function could be lost."

The SOCs are clear that the evaluations which assure intended functions are maintained must not rely on aspects of redundancy. However, even without taking credit for redundancy, an evaluation can demonstrate, in many instances, that the system or structure's intended functions are maintained even when an individual component(s) is experiencing degradation. This is contemplated in Section 3.2 of the guideline by the component intended function being derived from the system intended function. The current wording of the NEI Guideline does not sufficiently credit the concept that a structure or component's intended function is a function that supports the system intended function.

Section 4.2.1.3 also states that one of the factors that should be considered when selecting an appropriate program enhancement is "The risk significance of the structure or component." Southern Nuclear used this provision for Suppression Pool Temperature Monitoring during the LRDP and was told by the NRC staff that the approach was not satisfactory. Additional guidance is needed in this section to explain how considering risk significance when selecting program enhancements can be acceptably implemented.

Section 4.2.3 should be revised to provide specification of an appropriate demonstration for performance monitoring.

The amended license renewal rule requires, for each structure and component identified in Section 54.21(a)(1), a demonstration that the effects of aging will be adequately managed so that the intended function(s) will be maintained consistent with the CLB for the period of extended operation. One of the primary methods used today to assure continued compliance with the requirements of the CLB is performance monitoring. The industry uses performance and condition monitoring programs extensively, usually as prescribed by regulatory requirements, codes, and standards, and believes that these programs fulfill the requirements of the aging management reviews so that the CLB is maintained as outlined in 10 CFR 54.21. The NRC makes this determination in the SOC (pages 60 FR 22474 to 22475). Section 4.2.3 of NEI 95-10 Rev. 0, incorporates this philosophy and describes the process for using performance and condition monitoring in the aging management review. In addition, the guideline also provides some criteria for determining when it is appropriate to credit these programs for managing aging effects.

Section 4.2.3 of NEI 95-10, Rev. 0, identifies that a demonstration is required without describing the requirements for making this demonstration. Southern Nuclear believes that the demonstration should be made consistent with the discussions in the SOC; i.e. if the performance monitoring program readily reveals the degradation, then reasonable assurance is established that the CLB (pages 60 FR 22474 to 22475) is maintained such that a focus on design parameters (e.g. pipe wall thickness, design loadings, etc.) is unnecessary. Thus, the focus on functionality allows an applicant to deal with qualitative data and apply engineering judgment to address maintenance of the CLB in the period of extended operation just as in the current term. NEI 95-10 should provide these specifications of an appropriate demonstration for performance monitoring.