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NUCLEAR ENERGY INSTITUTE

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SENIOR VICE PRESIDENT AND  
CHIEF NUCLEAR OFFICER  
NUCLEAR GENERATION

November 27, 1996

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

**SUBJECT:** 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)

In response to the August 26, 1996 *Federal Register* notice, the Nuclear Energy Institute<sup>1</sup> is providing the enclosed industry comments on the draft Regulatory Guide DG-1047 "Standard Format and Content for Applications to Renew Nuclear Power Plant Operating Licenses" and NEI 95-10, "Industry Guideline for Implementing the Requirements of 10 CFR Part 54 The License Renewal Rule."

License renewal is an important issue for the nuclear power industry. The industry's objective is to achieve a stable, efficient, and predictable license renewal process. We believe the NRC had a similar objective in mind when it revised the license renewal rule. The development of NEI 95-10 provided a starting point for the industry and the NRC to share ideas on how to implement the license renewal rule.

The NEI 95-10 demonstration program was another step in support of the objective. It offered an opportunity to refine the interpretations as well as identify the sections of NEI 95-10 that may need improvement.

As observed in the demonstration program, implementation of the license renewal rule is complex and dependent on how the regulation and NEI 95-10 are interpreted. The industry and NRC have different views on some aspects

<sup>1</sup> NEI is the organization responsible for establishing unified nuclear industry policy on matters affecting the nuclear energy industry, including regulatory aspects of generic operational and technical issues. NEI's members include all utilities licensed to operate commercial nuclear power plants in the United States, nuclear plant designers, major architect/engineering firms, fuel fabrication facilities, materials licensees, and other organizations and individuals involved in the nuclear energy industry.

(61FR 43792)

61FR 43792  
Guides Manual  
Comments

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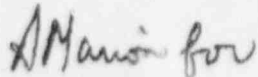
November 27, 1996

Page 2

of how to implement the rule. However, we are confident that through continued interactions with the NRC staff we can resolve our differences and arrive at the stated objective of a stable, efficient, and predictable license renewal process. It is in this context that we offer the enclosed comments.

Please call Doug Walters (202/739-8093) if you have any questions.

Sincerely,

A handwritten signature in cursive script, appearing to read "R Beedle for".

Ralph E. Beedle

DJW/dw

Enclosure

c: Mr. Carlton C. Kammerer, NRC

## Enclosure

### 1. Draft Regulatory Guide DG-1047 Comments

#### A. *Section C.1 Contents of an Application*

**Comments:** On Page 7, Line 8, suggest the sentence that reads "...to issuance of the license or when..." be rewritten to read "...to issuance of the **renewal operating** license..."

Also on Page 7, Line 10, suggest the words for the period of extended operation be added at the end of the sentence.

The second paragraph on Page 7 notes the format and content of the environmental report is delineated in Regulatory Guide 4.2, "Preparation of Environmental Reports for Nuclear Power Stations." Based on SRM 96-190 dated October 18, 1996, the NRC staff has been directed to develop a plan and schedule for development of a regulatory guide and environmental standard review plan for implementing Part 51. This could mean that Regulatory Guide 4.2 is supplemented or a new regulatory guide is written. This should be reflected in Regulatory Guide DG-1047.

In the section that describes an implementation plan:

Item #1 should be deleted because the statement 'list of commitments described in the license renewal application' is too broad. It seems to overlap the request contained in Item #3, which requests a list of tasks and it seems to overlap that information which will be contained in the Updated Final Safety Analysis Supplement (UFSAR), which is required to contain summary descriptions of programs and activities needed to manage the effects of aging.

Item # 2 seems to apply to existing activities and should be reflected in the document where the commitments reside. The administrative controls for these aging management programs may already be included in the UFSAR or could be added as part of the supplement provided with the application. It is recommended that Item #2 be deleted but that the intent be reflected in Section 6.3 of NEI 95-10.

Item #3 should be revised to read: "A list of tasks pertaining to ..."

Item #4 should be revised to read: "A schedule for the specific tasks listed in #3 above..."

**B. Section C.2 Endorsement of NEI Guideline**

This section endorses NEI 95-10, Revision 0, 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."

**Comment:** The sentence should be revised because in many of the NEI 95-10 demonstration program visits and in public meetings, the NRC staff cited Example 2 as an acceptable model for demonstrating the effects of aging are being adequately managed. Further, we will continue working with the NRC staff to gain acceptance of the other examples in NEI 95-10.

**C. Subsection C.3.1 Matters Not Subject to a Renewal Review**

This section 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."

**Comment:** The wording in this section infers that programs in the current term are presumed inadequate until proven to be otherwise. This section is not intended to address the acceptability of aging management programs. As noted, this section merely describes the licensee's responsibilities for addressing safety matters under its current license that are not within the scope of license renewal. The licensee's obligation under Part 54 is to demonstrate that aging effects are managed for license renewal period. This demonstration must be made whether the program exists in the current term or is a new program developed specifically for renewal.

Therefore, we recommend the sentences 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 demonstrations required by the license renewal rule must still be provided for these aging management programs."

## **2. Nuclear Energy Institute NEI 95-10, Revision 0, Comments**

### **A. General Comments**

NEI completed a demonstration program that tested the usability of NEI 95-10 and identified places in the guideline that may need to be changed. As was done in the initial development of NEI 95-10, the industry will propose revisions and submit them to NRC for review and comment. This is still the approach we plan to use; however, we have not yet finalized the proposed revisions. The following is a summary of the parts of NEI 95-10 being considered for change.

1. NEI recently sent a letter to NRC documenting our review of USIs and GSIs. Depending on the outcome of the NRC staff's review, Section 1.5 may be modified and a new appendix may be added to NEI 95-10.
2. Section 3.1 provides guidance for determining which systems, structures, and components are in the scope of the rule. We are considering the addition of clarifying language to assure that all intended functions and the appropriate evaluation boundaries are identified.
3. Verbiage may be added to section 4.1 that addresses the listing of structures and components within a commodity group.
4. Subsection 4.2.1.1 discusses the use of operating experience for identifying and assessing aging effects. We are considering a generic review of industry operating experience to determine trends in aging effects.
5. Two important observations generated from the demonstration program deal with the level of detail in the application and the FSAR supplement, and the demonstration required by Section 54.21(a)(3).
  - ◊ Level of detail is a question as to how much and what type of information is included in the license renewal application and the FSAR supplement. For example, when a qualitative versus a quantitative judgment is necessary. We agree that additional guidance is needed in Section 6.0 of NEI 95-10.
  - ◊ The demonstration required for license renewal is focused on aging management and the demonstration that aging effects are



adequately managed in the period of extended operation. This is a complex topic that covers a number of issues. We are considering guidance to clarify how to make this demonstration. This includes expanding the existing guidance in Section 4.0 on use of performance and condition monitoring programs.

6. Section 5.1.4 may require revision to further discuss when the evaluation of time-limited aging analyses can be delayed until after submittal of the renewal application. Such TLAAAs that are already part of existing regulation, e.g., 10 CFR 50.49 evaluations dealing with equipment qualified life, should be allowed to be performed in accordance with that existing regulation under already established programs.
7. Appendix B of NEI 95-10 identifies typical structure, component and commodity groupings and a determination as to whether they are active or passive. Several items in the appendix are not classified because the industry and NRC did not agree on the active/passive determination. We plan to revisit these items and add items as necessary.

## **B. Specific Comments**

### **1. Section 2.0 Overview of Part 54**

This section discusses the various elements of 10 CFR Part 54. One significant change made in Revision 0 is the inclusion of the phrase "in accordance with the plant-specific CLB." This wording appears in a few sentences to stress the fact that plant structures and components must meet their CLB requirements even in the period of extended operation. The language is not intended to imply that the CLB for a specific component or structure needs to be reconstituted for license renewal.

Section 2.0 also discusses in general terms the demonstration that must be made for license renewal including the information that is included in the application and FSAR supplement.

In essence, this section describes the standard that must be satisfied by a licensee pursuing license renewal.

**Comment:** Based on observations from the NEI license renewal demonstration program and our involvement with other license renewal industry efforts, there appears to be some confusion with respect to the standard for reasonable assurance specified in 10 CFR 54.29.

NEI agrees that a new regulations may establish new requirements. In the case of Part 54, we recognize that §54.29 delineates new requirements that must be satisfied for NRC to issue a renewed license.

Within section 54.29; however, it appears the specific requirements are being interpreted as new standards. For example, 54.29(a) states the Commission must find that "Actions have been identified in Paragraphs (a)(1) and (a)(2) of this section, such that there is reasonable assurance that the activities..." The standard is identifying actions and providing reasonable assurance. Confusion seems to exist on the interpretation of what constitutes reasonable assurance. If a program which manages a specific aging effect provides reasonable assurance today it also provides reasonable assurance in the period of extended operation. The standard of reasonable assurance which is relied on in the current term should not be a different for license renewal.

Another example is §54.29(a)(1) which discusses managing the effects of aging during the period of extended operation. The standard is managing the effects of aging. In the current term, a licensee may have many acceptable programs to manage aging effects using a qualitative approach. These programs could include performance monitoring programs which monitor for overall functionality. However, for license renewal purposes, we have heard in our interactions with the staff and in public meetings during the demonstration program, that these programs are not acceptable because the standard is "proof" using quantifiable data which establishes "objective evidence" that programs manage aging consistent with the CLB. The requirement for "proof" is an interpretation within section 54.29(a)(1) that tends to ignore the NRC regulatory oversight process that continues into the renewal term, as sanctioned by the SOC at 60FR22475.

We recommend working with the NRC staff to clarify Section 2.0 relative to the standard for reasonable assurance in 10 CFR 54.29. We propose that the clarifications be based in part on the portion of the SOC that states:

For the renewal term, 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" (60FR22469).

## **2. Subsection 3.3 *Documenting the Scoping Process***

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

**Comment:** 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. Therefore we recommend the sentence be revised as follows:

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

## **3. Subsection 4.1 *Identification of Structures and Components Subject to an Aging Management Review and Intended Functions***

This section briefly describes the concept of commodity groupings and lists.

**Comment:** The guideline should expand on the definition and intended use of commodity groupings in fulfilling the intent of the Rule.

Suggest incorporating 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 60FR22466, 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."



**4. Subsection 4.2.1.3 *Demonstration That the Effects of Aging Are Managed***

This subsection 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."

**Comment:** Additional guidance is needed in this section to explain how considering risk significance when selecting program enhancements can be acceptably implemented.

**5. Subsection 4.2.3 *Application of Existing Performance and/or Condition Monitoring Programs***

This subsection is part of the section on aging management reviews. This subsection discusses how existing performance and/or condition monitoring programs may be used as aging management programs.

**Comment:** Recommend this subsection be revised to clearly define how performance and/or condition monitoring programs can be credited as aging management programs.

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 during the current operating term, and believes that these programs fulfill the requirements for adequately managing the effects of aging 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. 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 60FR22474 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 to address maintenance of the CLB in the renewal term just as in the current term. Therefore, NEI 95-10 section 4.0 should be revised to provide these specifications of an appropriate demonstration for performance monitoring.

# Fax Transmittal

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