

June 5, 1997

FOR: The Commissioners

FROM: L. Joseph Callan /s/
Executive Director for Operations

SUBJECT: ACTIVITIES ASSOCIATED WITH IMPLEMENTATION OF 10 CFR PART 54

PURPOSE:

To inform the Commission of the status of the activities associated with the implementation of 10 CFR Part 54 (the license renewal rule).

BACKGROUND:

Since the amended license renewal rule became effective in June 1995, the NRC staff and industry have initiated a number of activities associated with implementing the rule. The staff informed the Commission of the status of these activities in SECY-96-059, dated March 18, 1996. An overview of the status of license renewal activities was also transmitted to the Commission in a memorandum dated, January 16, 1997.

The staff informed the Commission in SECY-96-159, dated July 12, 1996, of its intent to issue Draft Regulatory Guide, DG-1047, "Standard Format and Content for Applications to Renew Nuclear Power Plant Operating Licenses." The draft regulatory guide (RG) proposes to endorse a guideline developed by the Nuclear Energy Institute (NEI), "Industry Guideline for Implementing the Requirements of 10 CFR Part 54 -- The License Renewal Rule," NEI 95-10, Revision 0, as an acceptable method for implementing the license renewal rule. In a staff requirements memorandum, dated August 8, 1996, the Commission indicated that it did not object to the publication of the draft RG for public comment. A notice of availability and request for public comments was published in the Federal Register on August 26, 1996.

The staff's current and future activities include (1) reviewing plant-specific and owners group technical reports concerning specific structures and components for compliance with the renewal rule, (2) developing an RG for preparing a renewal application, (3) reviewing the industry guidance document, NEI 95-10, that would be endorsed by the RG if found acceptable, (4) preparing a standard review plan for license renewal, (5) preparing inspection guidance for license renewal, and (6) reviewing license renewal applications.

DISCUSSION:

Staff and industry activities associated with implementation of the license renewal rule are discussed next.

- [License Renewal Application Activities](#)
- [Baltimore Gas and Electric Company](#)
- [Duke Power Company](#)
- [Babcock and Wilcox Owners Group](#)
- [Westinghouse Owners Group](#)
- [Boiling Water Reactor Owners Group](#)
- [Regulatory Guide Development and Industry Guideline Review](#)
- [License Renewal Demonstration Program](#)
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LICENSE RENEWAL APPLICATION ACTIVITIES

The industry continues to submit plant-specific and owners group technical reports for staff approval instead of submitting actual license renewal applications. The intent is for a licensee to reference these reports in a future application if the decision is made to pursue license renewal. This approach provides a potential applicant with better information on which to base its evaluation of continuing plant operation beyond its current licensed term, including the cost of any additional aging management programs.

As discussed later in more detail, two licensees, Baltimore Gas and Electric (Calvert Cliffs) and Duke Power (Oconee) have submitted plant-specific reports for staff review. Baltimore Gas and Electric is contemplating a decision as early as this year on whether to pursue a renewed license and Duke is contemplating a decision in 1998. The Babcock and Wilcox, Westinghouse, and Boiling Water Reactor Owners Groups also have had active programs and have submitted reports for staff review and, ultimately, for reference in a licensee's application. Other licensees are active in license renewal and are participating in owners group or NEI license renewal initiatives but have not formally told the staff of their intentions regarding submittal of a license renewal application.

BALTIMORE GAS AND ELECTRIC COMPANY

The Baltimore Gas and Electric Company (BGE) has continued its license renewal activities in preparation for a possible license renewal application for Calvert Cliffs in late 1997 or early 1998. Baltimore Gas and Electric efforts include both technical and environmental activities (details of BGE environmental license renewal activities are discussed under the "Environmental Activities" section). In SECY-96-059, the staff informed the Commission that BGE intended to submit 26 technical reports in 1996. However, in lieu of submitting the 26 technical reports, BGE submitted only 5 reports and developed a format and content template for the technical reports.

Baltimore Gas and Electric decided to develop a format and content template because of staff comments made during the NEI-sponsored License Renewal Demonstration Program (LRDP), which is discussed later in this paper. During the LRDP, the staff commented that the reports did not contain, in all cases, the level of detail needed for the staff to complete its review. In response, BGE developed a template that provides guidance to ensure that the format and content of the reports are sufficient for the staff to begin a technical review. In May 1996, BGE proposed that the staff review the template in parallel with the technical review of the five reports. The staff agreed and the template review was broken into two 90-day efforts, each of which concluded with a senior management meeting between BGE and the NRC.

The first 90-day review effort consisted of the staff's evaluation of BGE's implementation of the template. The implementation highlighted key areas in which BGE and the staff differed on the content and level of detail of information required for a technical report or license renewal application. The second 90-day effort focused on resolving the staff's and BGE's differences in these key areas to ensure that BGE implementation of the template meets the staff's expectations. At the end of the template review, the staff concluded that, when properly implemented, the template should result in technical reports with a format and content sufficient for the staff to begin technical review. Baltimore Gas and Electric is currently using the template as a guideline to develop technical reports and is on schedule to submit a total of 28 reports between May and September 1997.

The staff also completed its initial review of the five BGE reports in the areas of scoping, intended functions, and aging effects, and by letter dated August 30, 1996, issued a request for additional information (RAI). By letter dated February 14, 1997, BGE responded to the staff's RAI. Baltimore Gas and Electric subsequently submitted four reports, including revisions to three of the five original reports that are consistent with the template requirements for content.

DUKE POWER COMPANY

The Duke Power Company (Duke) has established the Oconee License Renewal Project with the goal of completing a license renewal application and being prepared for submittal in late 1998. Duke is presently assessing the technical, regulatory, environmental, financial, and political aspects of license renewal before making the decision to apply. Duke plans to submit the technical information needed to support the renewal application in a topical report consisting of five major sections. These sections will encompass the entire plant. The first section on the reactor building was submitted for staff review on March 12, 1997, and the remaining sections covering structures, electrical components, mechanical components, and the reactor coolant system are scheduled for submittal by September 1997. In addition, Duke plans to incorporate by reference into its application topical reports prepared by the Babcock and Wilcox Owners Group (BWOG) and Westinghouse Owners Group (WOG) necessitating completion of the staff's review of the BWOG and WOG reports which are discussed in more detail later in this paper. Duke environmental activities are discussed under the "Environmental Activities" section.

BABCOCK AND WILCOX OWNERS GROUP

The BWOG has continued its activities under the Generic License Renewal Program (GLRP) to provide generic guidance to member utilities regarding the aging management programs necessary for selected components for complying with the license renewal rule. The BWOG has submitted aging management generic topical reports (GTRs) on the reactor coolant system (RCS) piping, the pressurizer (PZR), and the reactor pressure vessel (RPV). A fourth and final GTR on RPV internals is expected to be submitted in June 1997.

The staff has completed its review of the BWOG RCS piping GTR and issued a final safety evaluation report (FSER) on March 21, 1996. The staff is also preparing the FSER for the BWOG PZR GTR, which is expected to be issued in July 1997. The initial review of the RPV report is complete and the staff is currently developing the draft safety evaluation report (DSER).

WESTINGHOUSE OWNERS GROUP

The Westinghouse Owners Group (WOG) has continued to develop GTRs to assist its member utilities with the technical evaluation necessary for complying with the license renewal rule. The WOG has submitted four GTRs: RCS supports, Class 1 piping, PZR, and containment. A fifth GTR on RPV internals is expected to be submitted in June 1997. The WOG has also completed reports on five additional structures and components and expects to complete five more reports by the end of June 1997. The WOG has informed the staff that it expects to submit only two or three of these ten additional reports for staff review and approval. The remainder of these reports will be used to assist participating WOG plants in preparing a license renewal application.

The staff has completed its initial review of the WOG RCS supports GTR and is developing the DSER. The staff is performing its initial review of the Class 1 piping, PZR, and containment GTRs.

BOILING WATER REACTOR OWNERS GROUP

The Boiling Water Reactor Owners Group (BWROG) has a generic license renewal program to develop topical reports to assist its member utilities with the technical evaluations necessary for complying with the license renewal rule. The topical reports are based on a reference plant, and an applicant would justify any differences from that plant. In December 1995, the BWROG submitted a topical report on BWR primary containments. The staff completed its initial review of the report and issued its comments and RAI on February 29, 1996. On May 7, 1997, the BWROG informed the staff that it was suspending action on this report until the fundamental issues raised in this report and by public comments on the draft RG and NEI 95-10 are resolved. The BWROG indicated that it will inform the staff when it wants to reinitiate discussions on the report.

REGULATORY GUIDE DEVELOPMENT AND INDUSTRY GUIDELINE REVIEW

The public comment period for the RG and NEI 95-10 closed on November 29, 1996. To encourage public and industry participation, the staff conducted a public workshop on October 29, 1996, during the public comment period to discuss the draft RG, NEI guideline, and the staff's and industry's observations from the NEI-sponsored LRDP (discussed below). Comments received at the workshop are being addressed along with the written comments received.

Written comments on the draft RG and NEI 95-10 were received from NEI, five licensees, two reactor vendor owners groups, and the U.S. Department of

Energy. The comments included significant issues associated with implementation of the draft RG and NEI 95-10 guidance. A series of staff level meetings and a senior management meeting were held between the staff, NEI, and industry representatives to clarify positions on the issues. Additionally, staff positions on ten of the more significant issues were sent to NEI in a letter dated February 27, 1997. Nuclear Energy Institute responded to the staff's positions in letters dated March 14 and April 7, 1997. Interactions between the staff and industry have clarified positions, but differences still exist on implementation aspects of significant issues. The staff believes that a better understanding of the implementation issues associated with the regulatory guidance can be achieved through trial application of the draft guidance to specific structures and components during the plant-specific review processes. Therefore, the staff has decided to modify its approach for development of the RG and no longer plans to issue the final guide in September 1997.

The staff plans to focus on plant-specific and owners group reviews to gain needed experience with implementation of the rule and draft guidance. The staff will maintain the RG in draft form and use it along with the working draft of the license renewal standard review plan (SRP-LR) in performing the reviews. The staff would incorporate currently established positions and implementation guidance into the next working draft of the SRP-LR scheduled for release in September 1997. With this approach, experience gained from the trial use of the draft RG and from plant-specific and owners group reviews would be incorporated into the final RG. The staff would continue interactions with NEI during this time to develop the final RG, but on a lower priority basis, incorporating guidance as it is clearly established. The final RG will be published after completing the review of several license renewal applications.

LICENSE RENEWAL DEMONSTRATION PROGRAM

The NEI-sponsored industry LRDP was organized, implemented, and completed during 1996. The LRDP involved six volunteer licensees: (1) Baltimore Gas and Electric (Calvert Cliffs), (2) Duke Power (Oconee), (3) Southern Nuclear (Hatch), (4) Wisconsin Electric (Point Beach), (5) Philadelphia Electric (Peach Bottom), and (6) Virginia Power (North Anna and Surry). During the LRDP, the participating licensees used NEI 95-10, Revision 0, to (1) identify systems, structures, and components within the scope of the rule, (2) complete the integrated plant assessment process by performing an aging management review of a few select, passive, long-lived structures and components, (3) identify and evaluate time-limited aging analyses, and (4) prepare sample final safety analysis report (FSAR) supplements.

The staff visited five of the six licensees' facilities to obtain information to verify the adequacy of the guidance contained in NEI 95-10 for meeting the requirements of the license renewal rule and to identify the need for any additions, deletions, and revisions in the guideline. One licensee, Virginia Power, did not participate in the staff site visits but did participate in a peer review led by NEI. The staff accomplished its goal and identified strengths and weaknesses in the guideline. A lessons-learned report was published as NUREG-1568, "License Renewal Demonstration Program: NRC Observations and Lessons Learned," December 1996.

STANDARD REVIEW PLAN FOR LICENSE RENEWAL

A working draft of the SRP-LR reflecting the September 1994 proposed rule was made publicly available in the NRC's Public Document Room (PDR) in December 1995. The staff is currently modifying the working draft to reflect the 1995 amended rule. The working draft SRP-LR is also being expanded and updated to capture plant-specific technical report review experience, owners group topical report review experience, draft regulatory guide development experience, and administrative requirements.

The current working draft SRP-LR provides staff review guidance for specific structures and components. By giving detailed staff review guidance, the SRP-LR establishes the staff expectations regarding the contents of a renewal application for these specific structures and components. The staff will continue to revise the working draft SRP-LR as it gains experience from reviewing plant-specific technical reports and owners group topical reports and gains additional information from interactions with the industry (e.g., during development of the regulatory guide).

The staff plans to place an updated working draft SRP-LR in the PDR by September 1997. The staff still plans to complete and publish the revised draft SRP-LR after completing the review of several license renewal applications.

INSPECTION GUIDANCE FOR LICENSE RENEWAL

The staff is continuing to develop inspection guidance for license renewal. The staff plans to complete the draft inspection guidance to support the review of the first license renewal application. Consistent with the development of the SRP-LR and RG, the inspection guidance will be finalized after completing the review of several license renewal applications.

ENVIRONMENTAL ACTIVITIES

The Commission revised its environmental protection regulations (10 CFR Part 51) for license renewal on December 18, 1996 (61 FR 66542). In a staff requirements memorandum (SRM) dated October 18, 1996, the Commission instructed the staff to prepare a plan and schedule for the development of regulatory guidance for implementation of the environmental protection rule for license renewal. In its response to the SRM, dated December 19, 1996, the staff outlined plans that would lead to a draft and a final RG in July 1997 and March 1998, respectively, and a draft and a final environmental standard review plan (ESRP) in August 1997 and August 1998, respectively. NRR has prepared the draft ESRP, which is undergoing staff review in advance of Advisory Committee on Reactor Safeguards or Committee to Review Generic Requirements review (or both), should they prove necessary.

The industry has initiated several activities associated with implementing the environmental protection regulations for license renewal. Starting in November 1996, the staff met with BGE representatives in a series of public meetings to discuss BGE's environmental report template to ensure that the form, substance, and level of detail of its submittal for the Calvert Cliffs plant would be responsive to the requirements of the rule. These meetings have been progressively more detailed and resulted in the identification of areas that require further discussion and guidance before implementation. These include the generic and cumulative impacts associated with transportation operation in the vicinity of a high-level waste repository site, consideration of alternatives to mitigate severe accidents, environmental justice, mitigative measures, alternatives to the proposed action, and new and significant information. Good progress has been made on resolving these issues and the dialogue continues.

Duke is preparing the draft Oconee environmental report for license renewal and has discussed their plans with the staff. Separately, public meetings were also held with NEI on NEI's plans for developing generic guidance.

RESOURCES:

This paper provides the status of license renewal activities and does not involve changes in resource requirements. The revised approach for issuing the final RG allows reassignment of existing resources to focus on plant-specific and owners group reviews.

INFORMATION TECHNOLOGY:

No new anticipated impacts on information management or information technology are anticipated as a result of implementing the actions discussed in this paper.

L. Joseph Callan
Executive Director for Operations

Contact: S. Hoffman, PDLR/NRR
415-3245