

August 27, 1999

MEMORANDUM TO: William D. Travers
Executive Director for Operations

FROM: Annette L. Vietti-Cook, Secretary /s/

SUBJECT: STAFF REQUIREMENTS - SECY-99-148 - CREDIT FOR
EXISTING PROGRAMS FOR LICENSE RENEWAL

The Commission has approved the staff's recommendation to use Option 3: focus staff review guidance in standard review plan on areas where existing programs should be augmented, as described in SECY-99-148, to provide credit for existing programs for license renewal.

The staff should proceed with the development of the Generic Aging Lessons Learned (GALL) report and the license renewal Standard Review Plan (SRP) and regulatory guide. The GALL report should receive the benefit of the experience from the staff members who conducted the review of the license renewal applications. The staff should ensure that lessons learned on the initial license renewal applications are incorporated in these documents and should provide them to the Commission for information when they are released for public comment. The staff should ensure that regulatory guidance is clear and understandable to stakeholders so that the license renewal process is stable and predictable for future applicants.

The staff should seek stakeholders' participation in the development of the GALL report, SRP, and regulatory guide and should inform the Commission of any significant issues that may arise from this process.

- a. When the GALL report and SRP are issued in draft for public comment, workshops should be held to bring all interested stakeholders up to date.
- b. Hold focused public meetings between the staff and stakeholders to resolve comments on individual issues.
- c. Hold a Commission briefing after the comment period and the staff's initial evaluation of the comments.

The final GALL report and final SRP should be submitted to the Commission for approval prior to publication.

As more data is accumulated from license renewal applications of different designs, and experience is gained from reviewing more applications, the staff should prepare a detailed analysis and provide recommendations to the Commission on whether it would be appropriate to resolve generic technical issues, including any credit for existing programs, by rulemaking. The GALL report, SRP, and regulatory guide should also be updated, as appropriate, to capture

the additional lessons learned and improve the license renewal process.

cc: Chairman Dicus
Commissioner Diaz
Commissioner McGaffigan
Commissioner Merrifield
OGC
CIO
CFO
OCA
OIG
OPA
Office Directors, Regions, ACRS, ACNW, ASLBP (via E-Mail)
PDR
DCS



PUBLIC MEETING ON LICENSE RENEWAL RULEMAKING

June 28, 2001

BACKGROUND

The Commission requested in its August 27, 1999, Staff Requirements Memorandum responding to SECY 99-148, "Credit for Existing Programs for License Renewal," that the staff "prepare a detailed analysis and provide recommendations to the Commission on whether it would be appropriate to resolve generic technical issue, including any credit for existing programs, by rulemaking."

PURPOSE OF MEETING

To gather comments from stakeholders on whether it is appropriate to revise the license renewal rule

AGENDA

Introduction	Chris Grimes, NRR
License renewal rule and guidance documents overview	Sam Lee, NRR
Background on recommendation on rulemaking	Dave Solorio, NRR
Industry comments on rulemaking	Doug Walters, NEI
Public interest comments on rulemaking	Chris Grimes, NRR
Other participant comments on rulemaking	All
Summary and conclusions	Chris Grimes, NRR

LICENSE RENEWAL RULE

Scope of Rule [§ 54.4]

- Safety related systems, structures, and components relied upon to:
 - Maintain integrity of the reactor coolant pressure boundary
 - Ensure capability to shut down and maintain a safe shutdown condition
 - Prevent or mitigate offsite exposures comparable to those in §50.34(a)(1), §50.67(b)(2), or §100.11

- Non-safety related systems, structures, and components whose failure could prevent safety related function, as outlined above.

- Systems, structures, and components relied upon for compliance with regulations:
 - Fire protection (10 CFR 50.48)
 - Environmental qualification (10 CFR 50.49)
 - Pressurized thermal shock (10 CFR 50.61)
 - Anticipated transients without scram (10 CFR 50.62)
 - Station blackout (10 CFR 50.63)

LICENSE RENEWAL RULE

Integrated Plant Assessment [§ 54.21(a)(1)]

- Identify and list structures and components subject to an aging management review (AMR):
 - Perform intended function without moving parts or without a change in configuration or properties (passive)
 - Not subject to replacement based on a qualified life or specified time period (long-lived)

- Intended Functions: Functions that a system, structure, or component must be shown to fulfill that form the basis for including them within the scope of the rule.

- Describe/Justify: Methods to identify structures and components subject to an AMR from those structures and components within scope [§54.21(a)(2)]

- Demonstrate: Effects of aging will be adequately managed so that the intended function will be maintained consistent with the current licensing basis (CLB) for the period of extended operation [§54.21(a)(3)]

LICENSE RENEWAL RULE

Time-Limited Aging Analyses (TLAAs)

- Definition [§ 54.3]
 - Involve systems, structures, and components within scope of rule,
 - Consider the effects of aging,
 - Involve time-limited assumptions defined by current operating term,
 - Determined by licensee to be relevant in safety determination,
 - Involve conclusions related to performance of intended functions, and
 - Contained or incorporated by reference in CLB

LICENSE RENEWAL RULE

(TLAAs continued)

- Provide a list of TLAAs [§ 54.21(c)(1)] and demonstrate that, for the period of extended operation:
 - Analyses remain valid,
 - Analyses have been projected to the end of the period, or
 - Effects of aging on the intended functions will be managed.

- Exemptions [§ 54.21(c)(2)]
 - List plant-specific exemptions granted pursuant to 10 CFR 50.12 and in effect that are based on TLAAs as defined in § 54.3
 - Provide an evaluation justifying continuation for period of extended operation

LICENSE RENEWAL RULE

Final Safety Analysis Report (FSAR) Supplement

- Summary description of the programs and activities for managing the effects of aging and evaluation of TLAAs

Technical Specification Changes [§ 54.22]

- Changes and their justification necessary for managing the effects of aging during the period of extended operation

Environmental Report Supplement [§ 54.23]

- 10 CFR Part 51 amended in 1996 and 1999 to codify the results of a Generic Environmental Impact Statement (GEIS) which resolved 69 of the 92 environmental impacts identified for license renewal. Remaining impacts are addressed in a plant-specific supplemental environmental impact statement.

LICENSE RENEWAL RULE

Standards for Issuance of Renewed License [§ 54.29]

- Actions have been or will be taken with respect to:
 - Managing the effects of aging during the period of extended operation on the functionality of structures and components
 - Evaluating TLAAAs that require review
- Reasonable assurance that activities authorized by the renewed license will continue to be conducted in accordance with the CLB.

LICENSE RENEWAL REVIEW GUIDANCE

SECY 01-074 requests Commission approval for issuance of improved license renewal guidance documents

- Generic Aging Lessons Learned (GALL) report (NUREG-1801)
- Standard Review Plan for License Renewal (NUREG-1800)
- Regulatory Guide for License Renewal (RG 1.188)
- Nuclear Energy Institute (NEI) guidance NEI 95-10, Rev. 3

NEI is using these guidance documents to demonstrate the preparing of future license renewal applications

GALL REPORT

- Catalog of generic aging management evaluations
 - Builds on previous aging studies
 - Reviews aging effects
 - Identifies relevant aging programs
 - Evaluates program attributes to manage aging effects
- Evaluation Conclusion
 - Program is adequate and no further evaluation is needed, or
 - Program should be augmented or new program considered

PROGRAM ATTRIBUTES

1. Scope of program
2. Preventive actions
3. Parameters monitored or inspected
4. Detection of aging effects
5. Monitoring and trending
6. Acceptance criteria
7. Corrective actions
8. Confirmation process
9. Administrative controls
10. Operating experience

STANDARD REVIEW PLAN

- Provides staff guidance in reviewing license renewal applications
- References GALL report for generic aging evaluations
- Focuses on areas where programs should be augmented
- Incorporates lessons learned from initial license renewal reviews

REGULATORY GUIDE

- RG 1.188 proposes to endorse NEI 95-10, Revision 3, “Industry Guideline for Implementing the Requirements of 10 CFR Part 54 --- The License renewal Rule”
- NEI 95-10 provides guidance to applicants in preparing their license renewal applications
 - Standard format of license renewal application

ADVISORY COMMITTEE ON REACTOR SAFEGUARDS (ACRS) COMMENT ON GUIDANCE DOCUMENTS

April 13, 2001, ACRS letter:

“The staff should encourage applicants to include the results of the scoping process in their applications. The availability of these results will facilitate the review process significantly and make license renewal applications more understandable.”

CODIFYING THE GALL REPORT?

Codify the GALL report conclusions (GEIS-like) in Part 54 to exclude selected structures and components that are adequately managed by existing programs

Statements of Consideration (SOC) of Part 54:

- “... [A]s the Commission gains more experience with industry activities for management of passive, long-lived structures and components, it may consider further narrowing the scope of those structures and components requiring an aging management review.” (60 FR 22478)
- “Additional experience with managing the effects of aging on the [passive] function of these structures and components may narrow the selection of structures and components requiring an aging management review for license renewal in the future.” (60 FR 22476)

BACKGROUND ON RECOMMENDATION ON RULEMAKING

SECY-99-148, "Credit for Existing Programs for License Renewal," dated June 3, 1999

- Staff requested guidance from the Commission on the preferred approach of 3 options provided for crediting existing programs
- Genesis was March 3, 1999, letter to Roy Zimmerman from Anthony R. Pietrangelo of NEI providing "industry's views on how existing plant programs and activities should be credited for license renewal."
- NEI's position was that existing programs found acceptable for the current term should be deemed adequate for license renewal without further staff review, unless a significant change in the aging effect is expected during the period of extended operation. NEI in a subsequent letter, requested a commission briefing on this issue.

BACKGROUND ON RECOMMENDATION ON RULEMAKING - continued

SECY-99-148, "Credit for Existing Programs for License Renewal," dated June 3, 1999 - continued

- Option 1 - Do not review the adequacy of existing programs
- Option 2 - Amend the rule to exclude structures and components subject to existing programs
- Option 3 - Focus staff review guidance in standard review plan on areas where existing programs should be augmented

BACKGROUND ON RECOMMENDATION ON RULEMAKING - continued

Staff Requirements Memorandum 99-148, dated August 27, 1999

- Commission directed staff to pursue Option 3
- “As more data is accumulated from license renewal applications of different designs, and experience is gained from reviewing more applications, the staff should prepare a detailed analysis and provide recommendations to the Commission on whether it would be appropriate to resolve generic technical issues, including any credit for existing programs, by rulemaking. The GALL report, SRP, and regulatory guide should also be updated, as appropriate, to capture the additional lessons learned and improve the license renewal process.”

BACKGROUND ON RECOMMENDATION ON RULEMAKING - continued

Staff experience regarding implementation of license renewal rule

- Current writing of rule provides sufficient requirements for conducting license renewal reviews
- Generic Aging Lessons Learned Report (SECY-01-0074) provides credit for existing programs for license renewal purposes; therefore, staff believes that sufficient credit for existing programs has been provided. In addition, GALL should be a living document.
- No changes to warrant a generic exclusion for passive structures and components because experience gained thus far with first few renewal reviews has not resulted in the conclusion that in all cases existing programs completely and sufficiently in all respects manage the long-term effects of aging on the passive functions of structures and components.

BACKGROUND ON RECOMMENDATION ON RULEMAKING - continued

Staff experience regarding implementation of license renewal rule - continued

- Staff recognizes (through GALL effort) that there are some existing programs that do manage aging. Credit for these programs could be given and could provide opportunities for efficiencies.
- Staff interested in recommendations for rulemaking changes from members of the public

April 13, 2001

The Honorable Richard A. Meserve
Chairman
U.S. Nuclear Regulatory Commission
Washington, D. C. 20555-0001

Dear Chairman Meserve:

SUBJECT: PROPOSED FINAL LICENSE RENEWAL GUIDANCE DOCUMENTS

During the 481st meeting of the Advisory Committee on Reactor Safeguards, April 5-7, 2001, we reviewed the proposed final versions of NUREG-1800, "Standard Review Plan for Review of License Renewal Applications;" NUREG-1801, "Generic Aging Lessons Learned (GALL) Report;" Regulatory Guide 1.188, "Standard Format and Content for Applications to Renew Nuclear Power Plant Operating Licenses;" and NEI 95-10, Revision 3, "Industry Guideline for Implementing the Requirements of 10 CFR Part 54 - The License Renewal Rule." These documents provide guidance for preparing and reviewing license renewal applications. Our Subcommittee on Plant License Renewal met on March 27, 2001, to review these documents. During our review, we had the benefit of discussions with representatives of the NRC staff and the Nuclear Energy Institute (NEI). We also had the benefit of the documents referenced

Conclusions and Recommendations

1. The license renewal guidance documents should be approved for issuance.
2. The staff should encourage applicants to include the results of the scoping process in their applications. The availability of these results will facilitate the review process significantly and make license renewal applications more understandable.
3. The staff has agreed to update the GALL report periodically. The staff should also update the Standard Review Plan (SRP) and Regulatory Guide 1.188 to make them consistent with the updated GALL report.

Discussion

We reviewed earlier drafts of the license renewal guidance documents during our November 2-4, 2000 meeting and provided comments and recommendations in a report dated November 15, 2000. We concluded at that time that the draft documents described a consistent and understandable process to support the preparation and review of license renewal applications.

The current versions of the guidance documents include the resolution of comments provided by industry, the ACRS, and the public. The documents were revised to increase focus, eliminate insignificant aging effects, improve clarity, and to include changes resulting from the resolution of technical issues between the staff and the industry. The documents now provide closure for the great majority of aging management issues. The staff is continuing its dialogue with NEI and current applicants on a number of residual issues. This dialogue is likely to continue for some time as issues are closed and other issues are identified as a result of the lessons learned from reviewing future license renewal applications.

The development and staff review of previous license renewal applications would have been facilitated by the availability of a clearly defined baseline for regulatory acceptance that the guidance documents now provide. Given the significant number of applications being developed by licensees and reviewed by the staff, we agree with the staff and NEI that these documents should be approved. Changes resulting from the continuing dialogue between the staff and the industry can be incorporated into future updates. The staff has agreed to update the GALL report periodically. It should also update the SRP and Regulatory Guide 1.188 accordingly.

The License Renewal rule requires that for those structures, systems, and components (SSCs) that are within the scope of license renewal, applicants identify structures and components that are subject to an aging management review (AMR). The industry has taken the position that an applicant needs to include in its application only a description of the methodology used to implement the scoping and screening processes and the results of the screening process (i.e., the list of structures and components identified as requiring an AMR). The staff has modified the guidance documents to reflect this position. This meets the requirement of the rule, but our experience with past license renewal applications is that the scoping process is complex, and the lack of the scoping process results in the application (i.e., the list of SSCs that are within the scope of license renewal) represents a significant challenge for the reviewers and interested members of the public. An application that includes the results of the scoping process is more scrutable, facilitates the staff's review, and assists the staff in determining that structures and components subject to an AMR have been consistently identified. Without this information, the staff must rely on requests for additional information, site audits, and limited sampling of components not selected for an AMR. Inclusion of this information in the application does not constitute a significant added burden to the applicant and should, therefore, be encouraged.

Sincerely,

/RA/

George E. Apostolakis
Chairman

References

1. U.S. Nuclear Regulatory Commission, NUREG-1800, "Standard Review Plan for Review of License Renewal Applications for Nuclear Power Plants," dated March 1, 2001.
2. U.S. Nuclear Regulatory Commission, NUREG-1801, Vol. 1, "Generic Aging Lessons Learned (GALL) Report," dated March 1, 2001.
3. U.S. Nuclear Regulatory Commission, Regulatory Guide 1.188, "Standard Format and Content for Applications to Renew Nuclear Power Plant Operating Licenses," March 2001.
4. NEI 95-10, Revision 3, "Industry Guideline for Implementing the Requirements of 10 CFR 54 - The License Renewal Rule," March 2001.
5. U. S. Nuclear Regulatory Commission, NUREG-1739, "Analysis of Public Comments on the Improved License Renewal Guidance Documents," dated March 1, 2001.
6. Report dated November 15, 2000, from D. A. Powers, Chairman, Advisory Committee on Reactor Safeguards, to R. A. Meserve, Chairman, U.S. Nuclear Regulatory Commission, Subject: License Renewal Guidance Documents.



NUCLEAR ENERGY INSTITUTE

Douglas J. Walters
SENIOR PROJECT MANAGER,
LICENSING
NUCLEAR GENERATION

June 4, 2001

Mr. Christopher I. Grimes
Chief, License Renewal and Standardization Branch
Division of Regulatory Improvement Programs
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

SUBJECT: License Renewal Rulemaking

PROJECT NUMBER: 690

Dear Mr. Grimes:

The Staff Requirements Memorandum responding to SECY 99-148, *Credit for Existing Programs for License Renewal*, included a directive to the staff to "prepare a detailed analysis and provide recommendations to the Commission on whether it would be appropriate to resolve generic technical issues, including any credit for existing programs by rulemaking."

The industry does not believe rulemaking is necessary at this time. Two licensees have successfully exercised the process and received renewed operating licenses for five units. A third licensee is expected to receive a renewed license for a single unit by the end of June and a fourth licensee is scheduled to receive renewed licenses for two units early next year. We understand the renewal process and believe it is reasonably stable and predictable. We expect it to be even more efficient once we begin preparing applications that take advantage of the Generic Aging Lessons Learned (GALL) report and the License Renewal Standard Review Plan.

There are outstanding technical issues documented in your May 18, 2001, letter to NEI. We look forward to working with the staff on resolving those issues but do not anticipate the resolution will require codification or otherwise result in the need to amend the renewal rule. It may be appropriate to update the license renewal guidance documents and we are prepared to do so if necessary. While we have yet to exercise the GALL report in the preparation of an application, it appears to go a long way towards crediting existing programs. The GALL demonstration project is examining how that credit is provided and how generic it is. We are working with the staff on that project and expect to update the guidance documents based on lessons learned. We do not anticipate those lessons to result in the need to amend the regulations.

Attachment 5

Mr. Christopher I. Grimes

June 4, 2001

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We understand that the NRC is planning to hold a public workshop, possibly in August to obtain public input on the need to change the license renewal rule. We will participate and look forward to hearing the other stakeholders' views on this topic.

Sincerely,

A handwritten signature in cursive script that reads "Douglas J. Walters".

Douglas J. Walters

Enclosure



Union of Concerned Scientists

Citizens and Scientists for Environmental Solutions

June 26, 2001

Mr. Christopher I. Grimes, Chief
License Renewal and Standardization Branch
Division of Regulatory Improvement Programs
Office of Nuclear Reactor Regulation
United States Nuclear Regulatory Commission
Washington, DC 20555-0001
Earth

Dear Mr. Grimes:

Thank you for arranging for the Union of Concerned Scientists to have a seat at the table during the license renewal meeting scheduled for Thursday, June 28, 2001. Unfortunately, I will not be able to attend this meeting due to a matter that just recently developed. I had prepared three topics that I planned to cover during the meeting. Those topics are:

1. Gaseous and liquid radwaste systems: In May 2000, UCS submitted a petition for rulemaking seeking to revise the scope of the license renewal rule to cover those portions of the gaseous and liquid radwaste systems whose failure could potentially cause excessive releases of radioactivity to the environment. The justification that accompanied our petition provided some examples of credible equipment failures. We continue to believe that the rule needs to explicitly address these vulnerabilities.
2. Adequacy of aging management programs: During the session on license renewal that you chaired at the 2001 Regulatory Information Conference, I presented data on eight unplanned reactor shutdowns since January 1, 2000, due to equipment failures caused by aging. That list has been amended by an additional shutdown. Given that the primary purpose of aging management programs is to monitor the condition of important equipment and structures so as to effect repairs and replacements before failures occur, these reactor shutdowns indicate that the programs may not be achieving the expectations. We think that the data suggest that the license renewal rule, or the associated regulatory guidance, needs to be made more explicit with respect to the criteria defining acceptable minimum standards for aging management programs.
3. One-time inspections: At the workshop last fall and the subsequent Commission briefing, UCS conveyed a concern about one-time inspections. Today, the NRC grants license renewal applications predicated on the assumption that the one-time inspections will confirm negligible degradation. But what if these 'confirmatory' inspections reveal problems when the inspections are finally conducted years later? The licenses will have already been renewed and the plant owners may cry "Backfit!" when the NRC requests reasonable efforts based on

Attachment 6

the newly acquired knowledge.¹ The license renewal rule, or its associated regulatory guidance, may need to be made more explicit with respect to the staff's authority in dealing with one-time inspection surprises.

Sincerely,

A handwritten signature in black ink that reads "David A. Lochbaum". The signature is written in a cursive, flowing style.

David Lochbaum
Nuclear Safety Engineer
Washington Office

¹ A representative of an industry group has already presented to the Commission his belief that the NRC must go through the backfit rigmarole before asking any plant owner follow voluntary initiatives.