UNITED STATES
NUCLEAR REGULATORY COMMISSION
ADVISORY COMMITTEE ON REACTOR SAFEGUARDS
WASHINGTON, DC 20555-0001

April 18, 2017

The Honorable Kristine L. Svinicki
Chairman
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

SUBJECT: REPORT ON SUBSEQUENT LICENSE RENEWAL

Dear Chairman:

During the 642nd meeting of the Advisory Committee on Reactor Safeguards, April 6-7, 2017, we completed our review of Generic Aging Lessons Learned for Subsequent License Renewal (GALL-SLR) Report, NUREG–2191, Volumes 1 and 2, and Standard Review Plan for Review of Subsequent License Renewal Applications (SRP-SLR) for Nuclear Power Plants, NUREG-2192, prepared by the NRC staff. During this meeting, we were informed of proposed changes to the review process for subsequent license renewal (SLR). We had the benefit of discussions with representatives of the NRC staff and the Nuclear Energy Institute (NEI). Our Subcommittee on Plant License Renewal reviewed this matter during meetings on April 8, 2014, December 11, 2015, February 17, 2016, and March 23, 2017. We also had the benefit of the referenced documents.

RECOMMENDATION AND CONCLUSION

1. The GALL-SLR, Volumes 1 and 2, and the SRP-SLR, provide appropriate guidance for review of a subsequent license renewal application and provide a framework for license extension for 20 years of safe operation beyond 60 years. They should be issued.

2. The proposed review process that is informed by the aging management program (AMP) audit and the use of Inspection Procedure (IP) 71003 will assure the facility is formally inspected, the AMP and time limited aging analysis (TLAA) commitments are met, and all other conditions relative to subsequent license renewal are fulfilled.

BACKGROUND

Subsequent license renewal is the process by which a licensee and staff can achieve a 20 year period of extended operation (PEO) from 60 years to 80 years following initial licensing. NUREG-2191 is an update to the license renewal GALL (NUREG-1801) that provides NRC staff generic evaluation of existing, as well as new generic AMPs for subsequent license renewal, and establishes technical bases for their adequacy. NUREG-2192 provides guidance to NRC staff performing safety reviews of applications to renew nuclear power plant licenses in accordance with 10 CFR) Part 54, “Requirements for Renewal of Operating Licenses for Nuclear Power Plants.” The NRC regulations in 10 CFR 54.29

establish the standards for issuance of a renewed license. Two licensees are preparing to submit subsequent license renewal applications, one to be submitted in the third quarter of 2018, and one to be submitted in the first quarter of 2019. We learned from NEI that, based on an informal survey of potential licensees, as many as seven more may apply by 2023. Actions being taken by the staff to prepare for this potential workload are timely.

DISCUSSION

The subsequent license renewal review process proposed by the staff is an 18 month review that spans the time from the end of the application's acceptance by the staff to completion of the license renewal approval. The 18 month span assumes no hearing(s), a high quality application, and a clean, uncontested safety evaluation report. The process excludes preparation of a “Safety Evaluation with Open Items”. It includes AMP and TLAA reviews and audits and will provide a one-time major team inspection three months to a year before the licensee is scheduled to enter the PEO. The combination of the 18 month review span, the elimination of the “Safety Evaluation with Open Items”, and elimination of an additional IP-71002 inspection constitute the significant changes to the present license renewal review process.

The GALL-SLR Volumes 1 and 2, and the SRP-SLR provide appropriate guidance for review of a subsequent license renewal application. These documents reflect current industry experience, presently available research, and license renewal lessons-learned.

Inspections

The inspection procedure that will be used for the review of the application will be IP-71003. This procedure is designed to be a follow-up inspection for the AMPs, TLAAs, and other commitments. We support the IP 71003 requirement to ensure that the details of the AMPs, the TLAAs, and other commitments are fulfilled. We recognize that compliance with guidance in the GALL-SLR is the preferred method for staff evaluation of the AMPs, and that staff is willing to consider alternatives to the GALL-SLR AMP guidance based on the strength and thoroughness of a licensee-proposed alternative to the AMP.

Formal, documented physical inspections prior to entrance into the PEO will be conducted under Phase II of IP 71003 for the in-scope portions of the plant. This inspection will be a one-time major team inspection at each site. We support this approach and would like to be assured that the team includes a resident inspector familiar with the applicant’s site. The insights from those inspectors are very valuable for completing a thorough assessment of the site’s readiness to enter the PEO.

Inspection procedure IP 71003 contains four sequential Phases. Phase I is conducted during the second to last or last refueling outage before the licensee enters the PEO; Phase II is conducted three months to a year before the PEO; Phase III is conducted after the licensee enters the PEO if deemed necessary at the conclusion of Phase II; and Phase IV is an inspection 5-10 years into the PEO. Phases I and II are conducted before the PEO to support completion of the NRC’s review in sufficient time for licensees to make any necessary corrections to their AMPs before entering the PEO. The actions resulting from these inspections provide confidence that the structures, systems, and components within scope are in the material condition required for entrance into the PEO.

The GALL-SLR report identifies specific AMPs and TLAAs for which additional confirmatory research may be beneficial in determining acceptability. In addition, license renewal applicants are required to implement programs for the ongoing review of operating experience to confirm that the AMPs are, and will continue to be, effective in managing the aging effects for which they are credited. These actions by licensees will enable the open items in the AMPs and TLAAs to be addressed in a timely manner.

The GALL-SLR, SRP-SLR, and associated processes provide appropriate guidance for evaluating a subsequent license renewal application. When the facility is fully within its licensing basis, in excellent material condition, and its pre-PEO conditions have been completed, then we envision a successful conclusion regarding the safety aspects of the application. The overall programs established by the staff for subsequent license renewal will provide reasonable assurance that a license extension for twenty years of safe operation beyond sixty years can be approved.

Sincerely,

/RA/

Dennis C. Bley
Chairman

REFERENCES

1. U.S. Nuclear Regulatory Commission, NUREG-2191, “Generic Aging Lessons Learned for Subsequent License Renewal (GALL-SLR) Report,” Volume 1, February 2017 (ML16274A389).

2. U.S. Nuclear Regulatory Commission, NUREG-2191, “Generic Aging Lessons Learned for Subsequent License Renewal (GALL-SLR) Report,” Volume 2, February 2017 (ML16274A399).

3. U.S. Nuclear Regulatory Commission, NUREG-2192, “Standard Review Plan for Review of Subsequent License Renewal Applications for Nuclear Power Plants,” February 2017 (ML16274A402).

4. U.S. Nuclear Regulatory Commission, Inspection Procedure 71003, “Post Approval Site Inspection for License Renewal,” July 8, 2016 (ML16013A260).

5. U.S. Nuclear Regulatory Commission, NUREG 1801, “Generic Aging Lessons Learned (GALL) Report,” Revision 2, December 2010 (ML103409041).

6. Nuclear Energy Institute, “Second License Renewal: Nuclear Plant Operations Beyond 60 Years,” December 2016 (ML17088A885).

7. U.S. Nuclear Regulatory Commission, Inspection Procedure 71002, “License Renewal Inspection,” November 23, 2011 (ML11238A010).

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