

NRC License Renewal Guidance Documents – 2010 Update

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INTRODUCTION

Key guidance documents used for nuclear power plant license renewal were revised in 2010. These include NUREG-1800, “Standard Review Plan for Review of License Renewal Applications,” revision 2 (I) (SRP-LR), and NUREG-1801, “Generic Aging Lessons Learned (GALL) Report,” revision 2 (II) (GALL Report). The guidance documents were updated to reflect lessons learned and operating experience gained since the guidance documents were last issued in 2005.

DESCRIPTION OF THE ACTUAL WORK

In early 2009, the staff embarked on the initiative to update the license renewal guidance documents, SRP-LR and the GALL Report. These documents are used by nuclear power plant applicants to prepare their applications for license renewal, and provide associated guidance that the NRC staff uses to review the applications and to judge their acceptability. The guidance documents had last been updated (revision 1) in 2005.

The primary forcing functions for performing the update include the desire to: 1) capture operating experience gained since 2005, 2) integrate license renewal precedents since 2005, 3) account for changes in the NRC regulatory framework since 2005, 4) consider proposed changes identified by the nuclear industry, 5) incorporate content from license renewal interim staff guidance, and 6) account for changes in industry codes and standards since 2005.

During the 2005 update of the guidance documents, the focus of the staff’s efforts were on the Aging Management Review (AMR) line items in the GALL

Report. For the 2010 update, the staff shifted their focus to the content of the Aging Management Programs (AMPs) in the GALL Report.

NRC staff from multiple organizations participated on the guidance document update. The staff resources were augmented by expertise obtained from a contractor. In total, approximately 90 individuals supported the effort. The participants were organized in expert panels to support the aging management program update initiative.

The update initiative was performed in an open, transparent, and collaborative manner. In 2009, the nuclear power industry, via the Nuclear Energy Institute and the Electric Power Research Institute (Materials Reliability Program), submitted a number of proposed changes to the guidance documents for consideration by the NRC staff. The staff held two public workshops to have interactive discussions about the proposed changes and to receive feedback on the staff’s approaches. The draft NUREGs were also issued for formal public comment. A number of focused public meetings were held to discuss the draft AMP for buried and underground piping and tanks. The staff carefully considered comments from external sources as part of the guidance document update, and many were incorporated into the NUREGs.

On December 16, 2010, the staff issued the final SRP-LR and the GALL Report. Work is continuing on the associated knowledge management transfer document, NUREG-1950, “Disposition of Public Comments and Technical Bases for Changes in the License Renewal Guidance Documents NUREG-1801 and NUREG-1800.”

Overview of Changes Made to the GALL Report

Some of the changes made to the SRP-LR and the GALL Report include:

- The GALL Report is now a single volume.
- Guidance related to the ASME Code now identifies which Editions are acceptable; and clarifies how ASME Code Cases and Reliefs apply in the Period of Extended Operation.
- All AMPs were updated to reflect recent operating experience, license renewal precedents, changes in NRC regulations, content of license renewal Interim Staff Guidance, changes in industry codes and standards, and aligned with the revised AMP 10-element template.
- A number of further evaluation required items in the SRP-LR were eliminated based on experience or that the associated AMP was enhanced.
- The SRP-LR was aligned with the changes made in the GALL Report AMR line items.
- New AMPs were added to address neutron absorbing materials other than Boraflex, Pressurized Water Reactor internals, and buried and underground piping and tanks. Associated AMR line items were added for those programs.
- The scope of electrical cables addressed by the AMP for inaccessible power cables not covered by environmental qualification was increased to include electrical cables down to a nominal 400 volts.

Summary

During the 2010 update of the license renewal guidance documents, enhancements were made to both the SRP-LR and the GALL Report that will improve their usefulness to the nuclear power industry. The updated guidance documents will continue to provide an appropriate framework for applicants to develop programs that will continue to provide reasonable assurance to manage aging effects.

I NUREG-1800, "Standard Review Plan for Review of License Renewal Applications," revision 2 (12/2010)

II NUREG-1801, "Generic Aging Lessons Learned (GALL) Report," revision 2 (12/2010)

REFERENCES