

UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
OFFICE OF NUCLEAR REACTOR REGULATION  
WASHINGTON, D.C. 20555-0001

April 28, 2010

**NRC REGULATORY ISSUE SUMMARY 2007-16, REVISION 1,  
IMPLEMENTATION OF THE REQUIREMENTS OF  
10 CFR 54.37(b) FOR HOLDERS OF RENEWED LICENSES**

**ADDRESSEES**

All holders of operating licenses for nuclear power reactors under the provisions of Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50, "Domestic Licensing of Production and Utilization Facilities," except those who have permanently ceased operations and have certified that fuel has been permanently removed from the reactor vessel.

**INTENT**

The U.S. Nuclear Regulatory Commission (NRC) is issuing this revised regulatory issue summary (RIS) to clarify guidance for holders of renewed licenses on implementing the requirements of 10 CFR 54.37(b), regarding newly identified systems, structures, and components (SSCs) and information required to be included in final safety analysis report (FSAR) updates. This revised RIS includes changes for consistency with the NRC's revised license renewal interim staff guidance (LR-ISG) process, issued on August 7, 2009, as LR-ISG-2007-01, "License Renewal Interim Staff Guidance Process, Revision 1." In part, the NRC staff issued a revised LR-ISG process to address a recommendation from the NRC's Office of the Inspector General (OIG) 2007 report, OIG-07-A-15, "Audit of the NRC's License Renewal Program." Under the revised process, the NRC staff evaluates each LR-ISG to determine whether it includes SSCs subject to the provisions of 10 CFR 54.37(b), and documentation of this determination is included in the LR-ISG.

**BACKGROUND INFORMATION**

The license renewal rule in 10 CFR 54.21(d) requires that an applicant include in its license renewal application (LRA) a supplement to its FSAR that contains a summary description of the programs and activities credited for managing the effects of aging and the evaluation of time-limited aging analyses (TLAAs). The existing regulatory process, existing licensee oversight activities, and the additional regulatory controls associated with placing a summary description of aging management activities in the FSAR provide assurance that changes that could decrease the overall effectiveness of programs to manage the effects of aging or evaluation of TLAAs receive appropriate review by the licensee. In 10 CFR 54.37(b), the license renewal rule requires the following:

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After the renewed license is issued, the FSAR update required by 10 CFR 50.71(e) must include any systems, structures, and components newly identified that would have been subject to an aging management review or evaluation of time-limited aging analyses in accordance with § 54.21. This FSAR update must describe how the effects of aging will be managed such that the intended function(s) in § 54.4(b) will be effectively maintained during the period of extended operation.

The application of this regulatory requirement and the applicability of the backfit rule, 10 CFR 50.109, "Backfitting," have been the subject of several interactions between the NRC staff and the industry.

## **DISCUSSION**

### Newly Identified Systems, Structures, and Components

The intent of 10 CFR 54.37(b) is to capture those SSCs that, if they had been identified at the time of the license renewal application, would have been subject to an aging management review or evaluation of TLAAs. In the context of 10 CFR 54.37(b), newly identified SSCs that should be included in the next FSAR update required by 10 CFR 50.71(e) are those SSCs that meet one of the two following conditions:

- (1) There is a change to the current licensing basis (CLB) that meets the following criteria:
  - The change impacts SSCs that were not in scope for license renewal when the NRC approved the license renewal application.
  - The SSCs would have been in the scope of license renewal based on the CLB change if 10 CFR 54.4(a) were applied to the SSCs.
- (2) SSCs were installed in the plant at the time of the license renewal review that, in accordance with the CLB at the time, should have been included in the scope of license renewal per 10 CFR 54.4(a) but were not identified as in scope until after issuance of the renewed license.

SSCs that are plant additions or modifications installed after the renewed license is issued are not subject to the provisions of 10 CFR 54.37(b).

### Identification of SSCs under 10 CFR 54.37(b)

The language of 10 CFR 54.37(b) does not limit how or who finds newly identified SSCs. A licensee may identify SSCs that should be within the scope of its license renewal program at any time. The NRC staff may also discover newly identified SSCs. One way to identify these SSCs is through the LR-ISG process. Under this process, the NRC staff evaluates and documents its determinations as to whether an LR-ISG meets the provisions of 10 CFR 54.37(b) and the backfit rule. If the NRC staff has determined that a final LR-ISG

constitutes backfitting under 10 CFR 50.109, or communicates newly identified SSCs under the provisions of 10 CFR 54.37(b), then it will notify applicable renewed license holders as appropriate, for example by issuing site-specific letters or a generic communication. As such, a renewed license holder should determine whether the final LR-ISG applies to its facility and, if appropriate, take actions to ensure compliance with the requirements of 10 CFR 54.37(b).

The NRC issues LR-ISGs for various reasons, such as to (a) clarify which SSCs are to be included within the scope of license renewal under 10 CFR 54.4, (b) revise or clarify aging management recommendations in NUREG-1801, Revision 1, "Generic Aging Lessons Learned (GALL) Report," dated September 2005, or (c) address emergent issues. As an example, in light of recent operating experience, the NRC developed draft LR-ISG-2009-01 to address aging management of certain spent fuel pool neutron-absorbing materials. While LR-ISGs may address a variety of license renewal issues, only certain LR-ISGs identify SSCs subject to the provisions of 10 CFR 54.37(b). To date, the NRC has issued three such LR-ISGs:

- Station Blackout SSCs—In LR-ISG-02, dated April 1, 2002 (Agencywide Documents Access and Management Systems (ADAMS) Accession No. ML020920464), the NRC provided additional guidance for identifying the SSCs relied upon to meet the requirements of the station blackout rule (10 CFR 50.63, "Loss of All Alternating Current Power") as required by 10 CFR 54.4(a)(3). The guidance in this LR-ISG was subsequently incorporated into Section 2.5 of NUREG-1800, Revision 1, "Standard Review Plan for Review of License Renewal Applications for Nuclear Power Plants," dated September 2005 (SRP-LR).
- Electrical Fuse Holders—The NRC provided guidance on the identification and treatment of electrical fuse holders for license renewal in LR-ISG-05, dated March 10, 2003 (ADAMS Accession No. ML030690492). The guidance in this LR-ISG was subsequently incorporated into (a) SRP-LR Table 2.1-5 and Section 3.6, (b) Chapter VI and Section XI.E5 of the GALL Report, Volume 2, and (c) Appendix B to Nuclear Energy Institute (NEI) 95-10, Revision 6, "Industry Guidelines for Implementing the Requirements of 10 CFR Part 54—The License Renewal Rule," dated June 2005. NEI 95-10 is endorsed by NRC Regulatory Guide 1.188, Revision 1, "Standard Format and Content for Applications to Renew Nuclear Power Plant Operating Licenses," dated September 2005.
- Housings for Active Components—The NRC provided guidance on the identification and treatment of housing for active components for license renewal in LR-ISG-06, dated April 8, 2003 (ADAMS Accession No. ML031010423). The guidance in this LR-ISG was subsequently incorporated into SRP-LR Table 2.1-5 and NEI 95-10 Appendix B.

The NRC identified the need for these LR-ISGs during the review of early LRAs as the process was evolving. As such, most holders of renewed licenses may have already included the SSCs discussed in these LR-ISGs in the scope of renewal for their plants. However, the agency issued some early renewed licenses without the licensees explicitly including the subject SSCs in the scope of their license renewal applications. Holders of renewed licenses should verify that their license renewal programs include these SSCs and that appropriate aging management programs exist and are described in the FSAR. Those licensees whose programs do not already include these SSCs must perform an aging management review or evaluation of TLAAs in accordance with 10 CFR 54.21. For these SSCs, the updated FSAR must contain a description of how the effects of aging will be managed such that the intended function(s) in

10 CFR 54.4(b) will be effectively maintained during the period of extended operation. Development and implementation of aging management programs for newly identified SSCs under 10 CFR 54.37(b) are not considered backfits.

### FSAR Update

The FSAR update required by 10 CFR 54.37(b) must include newly identified SSCs that would have been subject to an aging management review or evaluation as a TLAA in accordance with 10 CFR 54.21. The FSAR update needs to describe how the licensee will manage the effects of aging in order to effectively maintain the intended function(s) in 10 CFR 54.4(b) during the period of extended operation.

When the NRC issued the amended license renewal rule in 1995, the Commission stressed the importance of describing the aging management reviews or TLAAAs for newly identified SSCs in the FSAR (Volume 60 of the *Federal Register* (FR), pages 22483–22484 (60 FR 22483-22484)). The FR notice noted that such a level of detail appeared to be at odds with the requirement in 10 CFR 54.21(d) that the FSAR supplement need only contain a summary description of the aging management programs or TLAAAs. However, the Commission explained that for those SSCs that were subject to an aging management review as part of the license renewal process, the application itself and the FSAR supplement together provided the requisite regulatory control to ensure the efficacy of the aging management program. Newly identified SSCs have not been subjected to the same level of review. Thus, the level of detail required to describe the aging management reviews or TLAAAs in the FSAR update for newly identified SSCs is appropriate, even though it is greater than the level of detail required for the original license renewal FSAR supplement.

### NRC Verification

The primary method the NRC uses to verify licensee implementation of the requirements of 10 CFR 54.37(b) is included in NRC Inspection Procedure 71003, “Post-Approval Site Inspection for License Renewal.” One of the objectives of Inspection Procedure 71003 is to verify that newly identified SSCs, pursuant to 10 CFR 54.37(b) and this RIS, are implemented in accordance with 10 CFR Part 54, “Requirements for Renewal of Operating Licenses for Nuclear Power Plants.”

## **BACKFIT DISCUSSION**

This revised RIS provides regulatory clarification and does not represent a new or different NRC staff position on the implementation of 10 CFR 54.37(b). It does not create or impose any new or different applicable NRC staff positions inconsistent with 10 CFR Part 54. It requires no action or written response beyond what is required in 10 CFR 54.37(b).

## **FEDERAL REGISTER NOTIFICATION**

A notice of opportunity for public comment on a draft revised RIS was published in the *Federal Register* (74 FR 13272) on March 26, 2009, for a 30-day comment period. The comment period was subsequently extended for an additional 30 days (74 FR 19109), in part, to facilitate

discussions during a public meeting on April 29, 2009. A summary for this meeting was issued on May 26, 2009 (ADAMS Accession No. ML091310269). Comments were received from the Nuclear Energy Institute by letter dated May 27, 2009 (ADAMS Accession No. ML091540208). The staff's evaluation of these comments is publicly available under ADAMS Accession No. ML100250316.

## **CONGRESSIONAL REVIEW ACT**

This RIS is not a rule as designated by the Congressional Review Act (5 U.S.C. §§ 801–808) and, therefore, is not subject to the Act.

## **PAPERWORK REDUCTION ACT STATEMENT**

This RIS does not contain new or amended information collection requirements subject to the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 et seq.). Existing information collection requirements were approved by the Office of Management and Budget, control numbers 3150-0011 and 3150-0155.

### Public Protection Notification

The NRC may not conduct or sponsor, and a person is not required to respond to, a request for information or an information collection requirement unless the requesting document displays a currently valid Office of Management and Budget control number.

## **CONTACT**

Please direct any questions about this matter to the technical contact listed below, or to the appropriate Office of Nuclear Reactor Regulation (NRR) project manager.

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