

NUCLEAR REGULATORY COMMISSION

[NRC-2012-0170]

Final License Renewal Interim Staff Guidance LR-ISG-2012-01:

Wall Thinning Due to Erosion Mechanisms

AGENCY: Nuclear Regulatory Commission.

ACTION: Interim staff guidance; issuance.

SUMMARY: The U.S. Nuclear Regulatory Commission (NRC) is issuing the final License Renewal Interim Staff Guidance (LR-ISG), LR-ISG-2012-01, "Wall Thinning Due to Erosion Mechanisms." This LR-ISG revises an NRC staff-recommended aging management program (AMP) in NUREG-1801, Revision 2, "Generic Aging Lessons Learned (GALL) Report," and the NRC staff's aging management review procedure and acceptance criteria contained in NUREG-1800, Revision 2, "Standard Review Plan for Review of License Renewal Applications for Nuclear Power Plants" (SRP-LR), to address wall thinning due to various erosion mechanisms for piping and components within the scope of the Requirements for Renewal of Operating Licenses for Nuclear Power Plants. This LR-ISG changes the recommendations in GALL Report, Revision 2, AMP XI.M17, "Flow-Accelerated Corrosion," based on the staff's review of several license renewal applications' flow-accelerated corrosion AMPs and stakeholder input.

ADDRESSES: Please refer to Docket ID NRC-2012-0170 when contacting the NRC about the availability of information regarding this document. You may access information related to this document, which the NRC possesses and is publicly available, using any of the following methods:

- **Federal Rulemaking Web site:** Go to <http://www.regulations.gov> and search for Docket ID NRC-2012-0170. Address questions about NRC dockets to Carol Gallagher; telephone: 301-492-3668; e-mail: Carol.Gallagher@nrc.gov.

- **NRC's Agencywide Document Access and Management System (ADAMS):**
You may access publicly-available documents online in the NRC library at <http://www.nrc.gov/reading-rm/adams.html>. To begin the search, select "ADAMS Public Document" and then select "Begin Web-based ADAMS Search." For problems with ADAMS, please contact the NRC's Public Document Room (PDR) reference staff at 1-800-397-4209, 301-415-4737, or by e-mail to pdr.resource@nrc.gov. The final LR-ISG-2012-01 is available under ADAMS Accession No. ML12352A057. The GALL Report and SRP-LR are available under ADAMS Accession Nos. ML103490041 and ML103490036, respectively.

- **NRC's PDR:** You may examine and purchase copies of public documents at the NRC's PDR, Room O1-F21, One White Flint North, 11555 Rockville Pike, Rockville, Maryland 20852.

- **NRC's Interim Staff Guidance Web Site:** LR-ISG documents are also available online under the "License Renewal" heading at <http://www.nrc.gov/reading-rm/doc-collections/#int>.

FOR FURTHER INFORMATION CONTACT: Mr. James Gavula, telephone: 630-829-9755, e-mail: James.Gavula@nrc.gov; or Ms. Evelyn Gettys, telephone: 301-415-4029; or e-mail: Evelyn.Gettys@nrc.gov. Both of the Office of Nuclear Reactor Regulation, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001.

SUPPLEMENTARY INFORMATION:

Background Information

The NRC issues LR-ISGs to communicate insights and lessons learned and to address emergent issues not covered in license renewal guidance documents, such as the GALL Report and SRP-LR. In this way, the NRC staff and stakeholders may use the guidance in an LR-ISG document before it is incorporated into a formal license renewal guidance document revision. The NRC staff issues LR-ISGs in accordance with the LR-ISG Process, Revision 2 (ADAMS Accession No. ML100920158), for which a notice of availability was published in the *Federal Register* on June 22, 2010 (75 FR 35510).

The NRC staff developed LR-ISG-2012-01 to: (a) revise the definition of “wall thinning” to include erosion mechanisms; (b) revise the definition of “flow-accelerated corrosion” and “erosion” to align them with the definitions commonly used in industry; (c) allow applicants to monitor wall thinning caused by erosion mechanisms in the AMP for flow-accelerated corrosion by (i) ensuring that extent of condition reviews identify any other components susceptible to similar degradation, and (ii) verifying that corrective actions have either eliminated the erosion mechanism, precluding the need for ongoing aging management activities, or included periodic wall thickness measurements in an AMP; and (d) make miscellaneous and editorial changes.

On July 13, 2012 (77 FR 41457), the NRC requested public comments on draft LR-ISG-2012-01. In response, the Nuclear Energy Institute (NEI) provided comments by letter dated August 27, 2012 (ADAMS Accession No. ML12244A004), which integrated multiple industry comments on the subject LR-ISG, including those submitted separately by Wolf Creek Nuclear Operating Corporation in a letter dated August 23, 2012 (ADAMS Accession No. ML12250A668). No other comments were submitted.

NEI's comments broadly recommended that the NRC create a separate AMP for mechanical erosion mechanisms, rather than mixing these phenomena into the existing Flow-Accelerated Corrosion program. The industry believed that the change proposed by the NRC would cause confusion in the current Flow-Accelerated Corrosion programs because of different susceptibility criteria and inspection selection methods and strategies for erosion mechanisms.

The NRC considered these comments in developing the final LR-ISG, but ultimately determined that the LR-ISG should be published in its current format. The staff notes that no applicant for a renewed licensee has ever proposed a separate AMP to address erosion mechanisms, but they have included activities for managing erosion mechanisms in either the Flow-Accelerated Corrosion or the Open-Cycle Cooling Water System AMPs. The NRC staff has approved both approaches, and in that regard, LR-ISG-2012-01 is consistent with existing industry and NRC practice. The staff further notes that it has not detected any confusion, as postulated by the industry, on the part of licensees that have chosen to include erosion mechanisms in the Flow-Accelerated Corrosion program. Detailed responses to the comments can be found in Appendix E of the final LR-ISG.

The final LR-ISG-2012-01 is approved for NRC staff and stakeholder use and will be incorporated into the NRC's next formal license renewal guidance document revision.

Congressional Review Act

In accordance with the Congressional Review Act of 1996, the NRC has determined that this action is not a major rule and has verified this determination with the Office of Information and Regulatory Affairs of the Office of Management and Budget.

Backfitting and Issue Finality

Issuance of this final LR-ISG does not constitute backfitting as defined in Section 50.109 of Title 10 of the *Code of Federal Regulations (10 CFR)*, (the Backfit Rule) and is not otherwise

inconsistent with the issue finality provisions in 10 CFR Part 52, "Licenses, Certifications, and Approvals for Nuclear Power Plants." As discussed in the "Backfitting and Issue Finality" section of LR-ISG-2012-01, the LR-ISG is directed to holders of operating licenses or combined licenses who are currently in the license renewal process or plan to enter the process in the future. The LR-ISG is not directed to holders of operating licenses or combined licenses until they apply for license renewal. The LR-ISG is also not directed to licensees who already hold renewed operating or combined licenses.

Dated at Rockville, Maryland, this 22nd day of April 2013.

For the Nuclear Regulatory Commission.

/RA/

John W. Lubinski, Director
Division of License Renewal
Office of Nuclear Reactor Regulation