



**Subsequent License Renewal (SLR)
Draft Generic Aging Lessons Learned (GALL)
Report and Standard Review Plan (SRP)
Managing Aging for Pressurized Water
Reactors (PWR) Vessel Internals**

Office of Nuclear Reactor Regulation
Division of License Renewal

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Agenda

- Reasonable Assurance
- Issue
- Guidance in draft GALL-SLR Report, SRP-SLR
- Industry Proposal
- Initial Assessment of Industry's Proposal
- Summary

Reasonable Assurance

- **Applicant must demonstrate:**
 - Effects of aging adequately managed
 - Intended function(s) maintained consistent with the current licensing basis (CLB)
- **Accomplished through:**
 - Integrated plant assessment (10 CFR 54.21)
 - Identification of components and aging effects requiring management (aging management review (AMR) line items)
 - Identification of AMP to manage aging effects
- **NRC staff must determine reasonable assurance that the plant can be operated within its CLB:**
 - Actions identified, and have been or will be taken to manage effects of aging on functionality of structures and components

Issue

- GALL Report, Rev. 2, Aging Management Program (AMP) XI.M16A references Materials Reliability Program (MRP)-227-A
- MRP-227-A:
 - Basis for aging management of PWR vessel internals using a 60-year analysis
 - Identifies components and aging effects requiring management for 60 years
 - Not updated to an 80-year analysis until 2020
- MRP-227-A does not completely identify aging management needs for 60-80 years

Draft SLR Guidance Documents

- Deleted AMP XI.M16A from GALL-SLR Report
 - Unacceptable to use as a generic AMP without an update of an inspection basis from industry that would cover the 60-80 year period
- Deleted detailed AMR items and replaced with items to address all reactor vessel internal (RVI) components for specific aging effects
- Added a new AMR further evaluation section to SRP-SLR to request a plant-specific AMP for PWR vessel internals

Provide Reactor Vessel Internal AMR Lines

- MRP-227 is the industry program for managing aging of PWR reactor vessel internals
- GALL-SLR AMR lines should be provided consistent with MRP-227 Rev 1 primary, expansion and existing inspection categories.
- GALL-SLR AMR could be updated consistent with the Staff safety evaluation for MRP-227 Rev 2 for SLR when it is available.
- Further Evaluations for Reactor Vessel Internals capture SLR period aging evaluations and would apply.

Industry Proposal

- Retain modified AMP XI.M16A that references the current program as the basis for managing aging from 60-80 years
- Retain aging AMR items for PWR vessel internals in License Renewal Interim Staff guidance (LR-ISG)-2011-04 (or MRP-227 Rev. 1)
- Allow AMP to be treated as a living program that will be periodically updated
- Allow commitment for submittal to NRC of program after update of MRP-227 to 80 years

Assessing Industry's Proposal

- Industry proposes to allow commitment to submit program after MRP-227 is updated to 80 years
 - NRC staff recognizes commitments were accepted during first renewals
- A commitment to submit an updated program leaves the technical issue open
 - Does not provide reasonable assurance

Assessing Industry's Proposal

- Proposal to provide modified AMP XI.M16A that references current program as the basis for 60-80 years is insufficient
 - Latest approved version of MRP-227-A does not provide a basis for 60-80 years
- Proposal to retain AMR items for PWR vessel internals in LR-ISG-2011-04 may be possible if:
 - AMR items change further evaluations entries from “No” to “Yes”
 - PWR vessel internals not currently listed are added as needed

Assessing Industry's Proposal

- Proposal to treat AMP as a living, periodically updated program is insufficient
- For reasonable assurance determination:
 - Gap analysis
 - Identify impacts on inspection categorization
 - Justify analytical methodology
- SRP-SLR further evaluation will provide guidance

Summary

- For SLR, NRC needs reasonable assurance that:
 - Components and aging effect combinations that need to be age managed through 80 years have been identified
 - An aging management program is in place that will be effective for 80 years
- NRC staff is prepared to discuss aging management options for PWR RVI components at this meeting and future public meetings
- Please submit comments via the Rulemaking Web Site: <http://www.regulations.gov> and search for Docket ID NRC-2015-0251

Questions