



Public Meeting Regarding Staff Review of EPRI Non-Proprietary Report No. 3002020105, “Materials Reliability Program: Pressurized Water Reactor Inspection and Evaluation Guidelines (MRP-227, Revision 2)”

Clarifications on Scope of Staff Review

Presenter: James Medoff

Public Meeting of Nov. 7, 2022

Staff Review for TR MRP-227, Rev. 2 (the Subject TR)

- NRC accepted MRP-227, Rev. 2 for review in Summer of 2022
- NRC PM for MRP-227, Rev. 2 review initiated the review as a “Standard Review” with inclusion of a PM option to hold an audit of changes made in MRP-227, Rev. 2 from the prior version in MRP-227, Rev. 1-A
 - “Standard Review” was chosen because:
 - Number and the complexity of changes in MRP-227, Rev. 2 versus MRP-227, Rev. 1-A
 - Methodology in MRP-227, Rev. 2 assesses aging over a 80-year service period versus MRP-227, Rev. 1-A only assessed aging over a 60-year service period
 - Potential logistics issues (See next slides for examples)
 - Regulatory Audit is being conducted for efficiency and effectiveness:
 - Address clarifications and confirmations
 - Ensure RAI process is used only for necessary topics to support NRC review/conclusions in SE

TR MRP-227, Rev. 2 Logistics Issues

- Logistics Issue #1: Bases for some component-specific screening or inspection and evaluation have been revised in MRP-227, Rev. 2 versus MRP-227, Rev. 1-A
 - Main objective of MRP-227, Rev. 2 – focus on changes to MRP-227 criteria that are needed to accommodate implementation of the guidelines during 60 – 80 year subsequent license renewal (SLR) periods
 - NRC staff conclusions in MRP-227, Rev. 1-A (i.e., related to 60-year service period) are may not be applicable for 80-year service period for these for some component-specific screening or inspection and evaluation

TR MRP-227, Rev. 2 Logistics Issues (Continued)

- Logistics Issue #2 – Revisions to Applicant/Licensee Action Item Resolution:
 - MRP-227-A included Applicant/Licensee Action Items (A/LAI)
 - MRP-227, Rev. 1-A addressed these Applicant/Licensee Action Items from MRP-227-A
- Justification to resolve these A/LAIs in MRP-227, Rev. 1-A were based on an aging over a 40 – 60 year license renewal period
- MRP-227, Rev. 2, appears to resolve some topics in these A/LAIs in a manner different from MRP-227, Rev. 1-A.
 - NRC staff seeks to understand if:
 - *Resolution of A/LAIs remain valid for MRP-227, Rev. 2 or*
 - *Updates made in MRP-227, Rev. 2, including bases, support A/LAIs remaining resolved for 80-year service period*
- A/LAI #6 on inaccessible B&W core barrel components is an example.

TR MRP-227, Rev. 2 Logistics Issues (Continued)

- Logistics Issue #3 – Referencing of WCAP-17096-NP-A, Rev. 2
 - WCAP-17096-NP-A, Rev. 2 applies only to MRP-227-A (status of Primary and Expansion category components)
 - WCAP-17096, Rev. 3 (a pending review) applies to MRP-227, Rev. 1-A (the status of Primary and Expansion category components)
 - Version of WCAP-17096 applicable to MRP-227, Rev. 2 (status of Primary and Expansion category components) has NOT been developed yet
- Logistics Issue #4 – MRP-227, Rev. 2, discusses use of MRP-211 and BWRVIP-100, Revision 1-A lower bound fracture toughness value methods
 - Chapter 6 does not address the Part 21 and open item on lower bound fracture toughness values identified in EPRI Letter MRP 2021-019
- Logistics Issue #5 – MRP-227, Rev. 2, references Crack Growth Model in EPRI Report No. 3002003103
 - Same report used for development of ASME Code Case N-889
 - MRP-227, Rev. 2 does not address conditions on Code Case N-889, as described in Table 2 of Regulatory Guide 1.147, Revision 20