



SLR PWR Vessel Internals GAP Analysis for Lead Plant

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Agenda

- ▶ Lead Plant Gap Analysis Approach
 - Update RVI Component List
 - Update Mechanism Screening Criteria
 - Component Screening & Evaluation (MRP-191 Update)
 - Issue Lead Plant Inspection Guidance
- ▶ Lead Plant and MRP Timeline
- ▶ Gap Analysis Summary

Lead Plant GAP Analysis Approach:

GAP Analysis provides integration with Industry efforts that are determining the parts of previous MRP-227 development that require update for SLR. Activities include: (those with proposed NRC briefings shown in red italic):

- ▶ Update RVI component list
- ▶ *Update aging degradation mechanism screening criteria as necessary*
- ▶ Component Screening and Evaluation
 - *Perform component screening for aging degradation mechanisms*
 - *Identify affected components*
 - Evaluate primary, expansion, and existing components examination strategies, and update as needed
- ▶ *Integrate affected components into inspection guidance*

Lead Plant Activity: Update RVI Component List

- ▶ Implement MRP-227-A A/LAI 1 & 2 and update Lead Plant RVI component list as necessary
- ▶ Confirm no component replacements or modifications since first license renewal
- ▶ Provide input to MRP-191 component and material update

MRP Activity: Update Mechanism Screening Criteria

- ▶ Simultaneous with lead plant RVI Component List Update activity
- ▶ Review MRP-175 screening criteria and identify criteria that will change
- ▶ Update of screening criteria as necessary
- ▶ Included as part of planned MRP-191 update
- ▶ NRC Staff briefing and follow-up technical discussions planned

Industry and Lead Plant Component Screening and Evaluation (MRP-191 Update)

- ▶ Based on Lead Plant RVI Updated Component List and MRP Updated Screening Criteria
- ▶ Identify components with “new/changed” degradation criteria (update MRP-191)
- ▶ Identify any previously identified “Category A” component where extended operation would cause aging effect to become credible.
- ▶ Provide these components for FMECA evaluation
- ▶ Provide retained list of Category A components for update of MRP-191 list of no additional measures components

Industry and Lead Plant Component Screening and Evaluation (Cont.)

- ▶ Develop re-screening and FMECA analysis of non-category A components and identify revised primary and expansion inspection components
- ▶ Issue MRP-191 update when screening inputs and inspection aging management strategies are complete
- ▶ Identify components where extended operation could affect applicability of prior functionality analysis results (update to MRP-230/232)
- ▶ Upon completion of aging management strategies, issue interim guidance for any needed changes to Primary, Expansion and Existing Programs tables of MRP-227
- ▶ Brief NRC Staff and engage with NRC in follow-up technical discussions

Issue Lead Plant Inspection Guidance

- ▶ MRP will recommend Lead Plant inspection guidance based on MRP-191 categorization and ranking and Industry operating experience.
- ▶ Lead Plant gap analysis will identify changes to Primary, Expansion and Existing Programs tables of MRP-227 based on gaps associated with screening of aging mechanisms, FMECA Group changes and Category changes.
- ▶ Engineering analysis or functionality assessments may be performed to confirm categorization and ranking associated with Primary, Expansion and Existing Program assignments.

Gap Analysis Summary to Identify

- ▶ Gap Analysis Methodology:
Based in part on MRP-175 & MRP-191 process
- ▶ Screening for additional aging effects or mechanisms:
Updates to MRP-175 and MRP-191 results
- ▶ Identify components with potentially more severe aging:
Updates to MRP-191 Categorization and Ranking
- ▶ GALL-SLR aging management program updates:
 - MRP-191 Categorization and Ranking used to identify program updates
 - Potential program changes to include: inspection categories, links, exam method/frequency, and exam coverage

Lead Plant & MRP Integrated Timeline

- Activity Timeline

Dec 2016	Draft MRP-175 Rev Issued
Jul 2017	GALL-SLR Issued
Dec 2017	Draft MRP-191 Rev issued
4 th Qtr 2017	MRP-227 Lead Plant Inspection Guidance Issued
1 st Qtr 2019	Surry SLRA issued for NRC review
4 th Qtr 2020	MRP-227 Rev 2 submitted for NRC review



Meeting Closure

Are there any technical concerns that require additional discussion?

