



Project: Aging Management Program Technical Assessment for Subsequent License Renewal

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EPRI Long-Term Operations

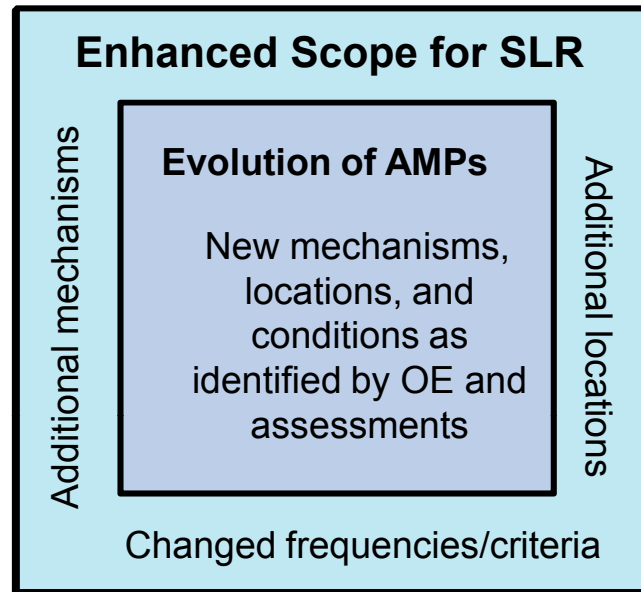
NEI/NRC License Renewal Meeting

June 28, 2012

Objectives

- Develop a **technical** basis/communication document that:
 - Is a proactive industry assessment of technical bases and needs for current Aging Management Programs (AMPs) to support Subsequent License Renewal
 - Specifically engages plant-level personnel for input and review
 - Is structured around the current NRC processes and guidance for license renewal (SRP and GALL)
 - Links technical bases to a common review process
 - Includes EMDA considerations
 - Supports industry incorporating the research results and OE into AMPs

Aging Management Enhancements for Subsequent License Renewal (SLR)



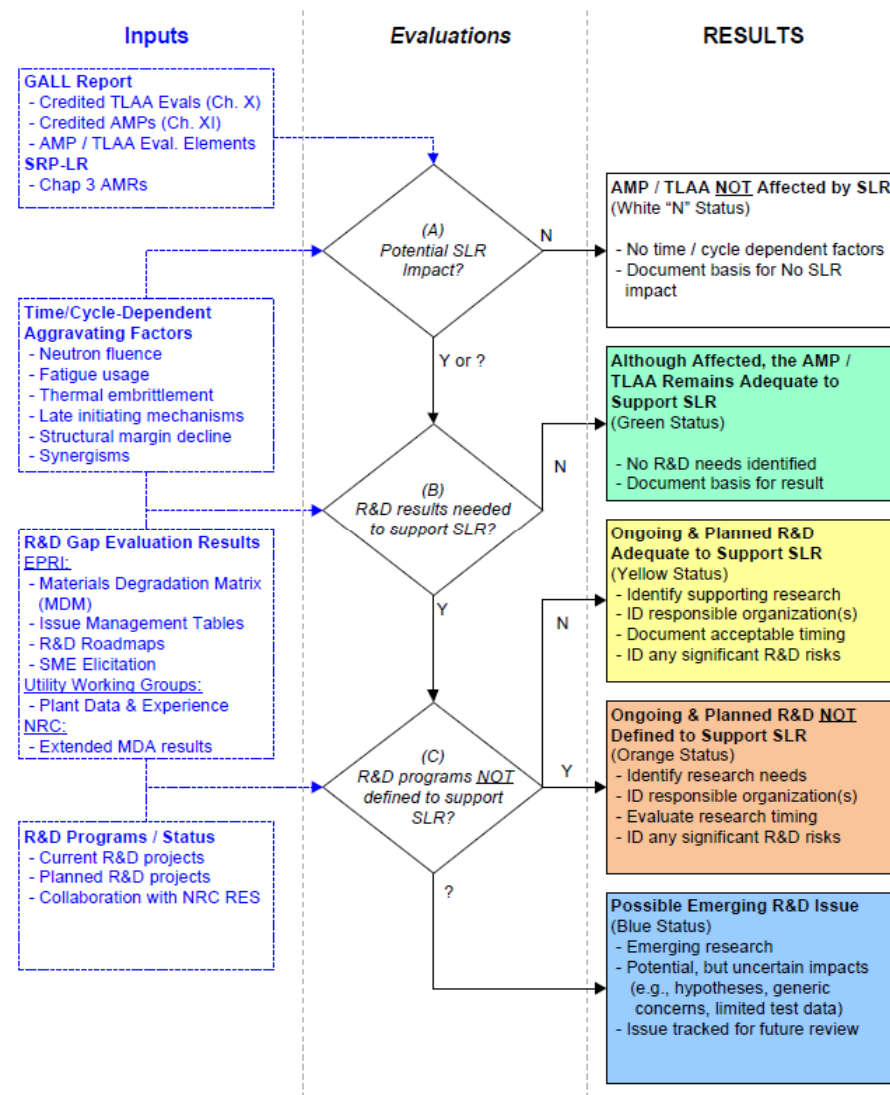
Expected enhancements <60 yrs



Expected enhancements >60 yrs
(Address risks for additional scope)

Flow Diagram for Technical Gap Assessment

- The approach proposed is a three step (A,B,C) process, resulting in categorization of AMPs as follows:
- (1) Existing AMP Adequate to Support SLR (Green Status)
- (2) AMP Enhancement Needed to Support SLR (Green Status with Implementation Tag)
- (3) AMP Enhancement Needed with Ongoing & Planned R&D Adequate to Support SLR (Yellow Status)
- (4) AMP Enhancement Needed but Ongoing & Planned R&D NOT Defined to Support SLR (Orange Status) – **Gaps Identified for Action**



AMP / TLAA R&D Evaluation Process

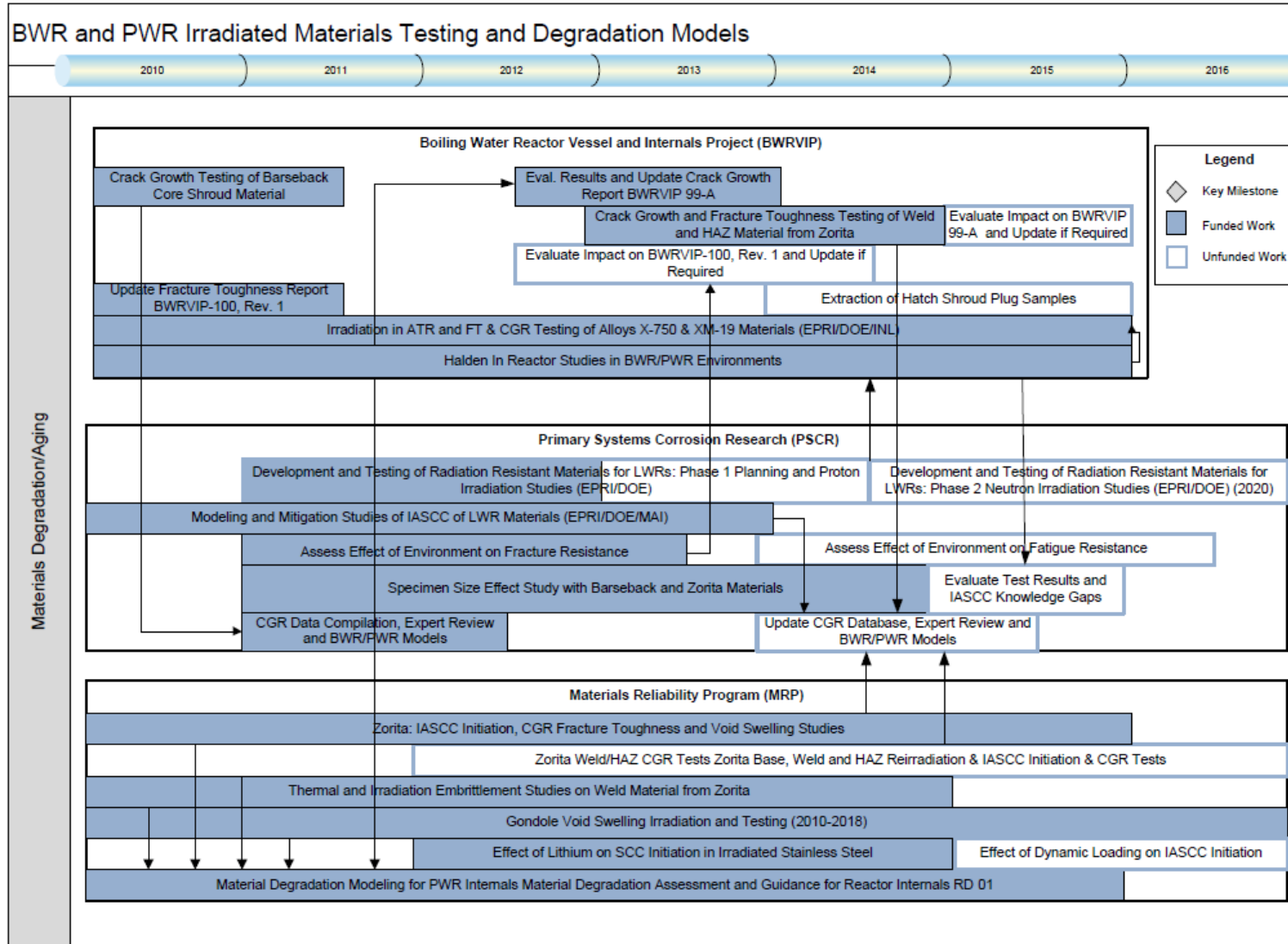
Inputs and Outcomes

- Engage NEI License Renewal Working Groups for review and comments of applicable sections
 - Mechanical, Electrical, and Structural Areas
 - Additional Technical Review Inputs as Appropriate
 - Potential new plant perspective versus research focused SMEs
- Input to utilities on technical bases in developing needed changes for plant-specific AMPs to support SLR
- Reference material for NRC consideration
- Expected to be periodically updated

Framework and Typical Data Sources

- GALL Report: Section XI of the GALL Report will be used as a **framework** for the organization of the report.
- NRC Extended Materials Degradation Assessment (EMDA): The results of the NRC EMDA should be considered in the evaluations.
- EPRI Gap Assessments:
 - Materials Degradation Matrix (MDM): The MDM provides a comprehensive review of degradation mechanisms applicable to light water reactor plant nuclear steam supply system components and assesses the extent to which these degradation mechanisms are understood.
 - Issue Management Tables (IMTs): The IMTs are a summary tool that assist EPRI and the industry in prioritizing and addressing materials related R&D gaps.
- EPRI Strategic Roadmaps: Long-term and strategically significant R&D efforts are tracked by EPRI in summary roadmaps. Input from these documents can be used to evaluate the state and timing of R&D for the materials degradation issues addressed.

EPRI Strategic Roadmap Example



Product Plan

- Solicit AMP-specific input on new/significant issues from reviewers in parallel with developing initial draft
 - Subject matter experts
 - Utility plant working groups (represents plants in PEO)
- Develop draft version
 - Bin AMPs with low risks for changes and highlight those with potential/expected technical issues
 - Screen for granularity of technical issues in AMPs (potential for one to become two?)
 - Provide appropriate sections for follow-on review and resolution of comments
- Iterations to gain consensus from industry
 - Continuing engagement with NRC

Typical Review Guidance and Document Format

- General Considerations
 - Focus on aging management effects
 - Beyond expected increases in fluence, cycles, etc...
 - Environmental and operating changes
 - Site specific events
 - Load cycling per dispatch requirements
- Document Format
 - Specific cross-reference to GALL AMPs and AMR Tables
 - References to research bases supporting assessment results

Discussion and Feedback



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