



EPRI NRC Nuclear Power Plant Piping Fatigue Issues Meeting Introduction

Mo Dingler
MRP TS TAC Chairmen

Public Meeting
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Topics and Objectives (1/2)

- Stress- Based Fatigue Monitoring Methodology to address RIS 2008-030
 - Discusses methodology for including 6-stress tensors and including EAF
 - Identify an approach addresses the concern identified in the RIS
- Improved Basis and Requirements for Break Location Postulation
 - Share results of work that shows CUF does not correlate well with leak probability and consequence of $CUF_{en}=1.0$ is low, alternate approach offered
 - Identify alternatives to the current CUF approach that may be applied in a situation where a break exclusion location reaches a CUF above 0.1

Topics and Objectives (2/2)

- Process and Technical Basis for Identifying Environmentally Assisted Fatigue (EAF) Limiting Locations
 - provides an approach for identifying most limiting locations as specified for license renewal under GALL 2
 - Identify an approach that meets the intent of the GALL 2 requirements
- Management of Thermal Fatigue in Normally Stagnant Non-Isolable Reactor Coolant System Branch Lines (MRP-146, Revision 1)
 - Update NRC on changes since MRP-146S was presented
 - Potential NRC action : GALL 2 references MRP-146 Rev. 0 which is now a superseded document, recommend interim staff guidance to address this issue

NEI 03-08 Materials Initiative (Industry Implementation of MRP-146)

- *MRP-146 (and S and Rev. 1) were issued under the Materials Initiative with “Needed” Requirements*
- *The purpose of this Initiative is to:*
 - *provide a consistent management process*
 - *provide for prioritization of materials issues*
 - *provide for proactive approaches*
 - *provide for integrated and coordinated approaches to materials issues*
- *Actions required by this Initiative include:*
 - *commitment of executive leadership and technical personnel*
 - *commitment of funds for materials issues within the scope of this Initiative*
 - *commitment to implement applicable guidance documents*
 - *provide for oversight of implementation*

Environmentally Assisted Fatigue Expert Panel (Industry Input to Additional Fatigue Topics)

- Objective of panel is to provide leadership for industry activities to address EAF, identify research needs and set priorities
- Objective of research is to minimize the impact of any new procedures and acceptance criteria for the plant owners while meeting the NRC regulation goals for extended plant life and new plants
- EAF Panel first met in June 2010
- MRP funded EPRI research on this issue since ~2005
- BWRVIP and ANT also started funding EPRI research on EAF issues in 2011
- Panel participants include NSSS and A/E vendor organizations, Utility Staff, and ASME members (independent contractors)
- NRC (Regulation and Research) representatives have attended and contributed
- Regular meetings held during ASME BPVC meetings

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