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BWRVIP Program & Revision 2 of the Generic Aging Lessons Learned (GALL) report

Chuck Wirtz

FirstEnergy

BWRVIP Integration Committee Chairman

EPRI-NRC Technical Exchange Meeting

May 25-26, 2010

BWRVIP and the GALL Presentation Topics

- Background
- BWRVIP positions on references to BWRVIP reports in the GALL
 - General Positions
 - Inspection & Evaluation (I&E) Guidelines
 - Repair Design Criteria
 - Water Chemistry Guidance
 - Supporting References
- Summary

Background

- BWRVIP Reports cited in the GALL Report as bases for aging management program implementation
 - I&E Guidance
 - Repair Design Criteria
 - Water Chemistry Guidance
 - Key Supporting References
 - General references

Background (cont)

- BWRVIP program is not static
 - I&E Guidelines are periodically reviewed and revised based on new data
 - Water Chemistry Guidelines are revised on a fixed schedule (interim changes every 2 yrs., full revision every 4 yrs.)
 - ISP Reports are updated as new test data become available
 - New technical reports documenting research data are published periodically

Background (cont)

- License Renewal

- Early in the BWRVIP Program development, it was recognized jointly by Industry and NRC personnel that BWRVIP Program guidance could play an integral role as aging management programs for license renewal
- As such, BWRVIP I&E Guidelines have license renewal appendices that evaluate 10 CFR 54 issues
- Other BWRVIP technical reports do not typically contain license renewal appendices

BWRVIP General Positions on Reference Revisions

- Approach should be focused on BWRVIP program implementation as NEI 03-08 Materials Initiative Issue Program, not on compliance with specific report revisions
- Utility compliance with NEI 03-08 is required, covered under 10CFR50 Appendix B and thus subject to review and inspection by the NRC, and all deviations from “mandatory” or “needed” NEI 03-08 guidance are required to be reported to the NRC
- This approach is consistent with NRC license renewal staff position for ASME Code implementation for license renewal
- The overall approach should be flexible and account for periodic updates to BWRVIP program documents

BWRVIP General Positions on Reference Revisions (cont)

- GALL should reference “*latest approved guidance*” for reports **credited** for aging management and clarify that application of later approved guidance is acceptable without further demonstration required
e.g. “*latest approved version of BWRVIP-41*”
- Reports **credited** for aging management should include applicable
 - Inspection & evaluation (I&E) guidelines
 - Water chemistry guidance
 - Integrated Surveillance Program (ISP) documents

BWRVIP General Positions on Reference Revisions (cont)

- BWRVIP Repair Design Criteria are not required to demonstrate adequate aging management and should be cited for reference only
(but are referenced in the body of XI.M9)
- Other supporting technical reports should be cited for reference only

BWRVIP Position on Reference of Inspection and Evaluation Guidelines

- Current I&E Guidelines status
 - 14 I&E Guidelines are cited/referenced in draft R2 of the GALL
 - I&E Guidelines have fixed BWRVIP number (revisions do not receive new BWRVIP report numbers)
 - Most guidelines include a license renewal appendix or have an NRC license renewal SE
 - Guidelines may be directly cited in GALL (e.g. BWRVIP-18) or indirectly (e.g. BWRVIP-183 inspections for top guide grid beams)
 - Use of the latest I&E Guidelines by the utilities is required under the NEI 03-08 initiative

BWRVIP Position on Reference of Inspection and Evaluation Guidelines (cont)

- Position for I&E Guidelines
 - Appropriate for citation in GALL Programs
 - GALL AMP text should cite the I&E Guideline generically; e.g., “*BWRVIP-41, latest approved revision*”
 - Reference list should capture latest revision in use at the time GALL last revised; or perhaps the reference list could be separated from the GALL so it could be updated more easily
 - GALL Report text should capture allowance for use of later revisions
 - License renewal applicants should be evaluated against the latest approved version
(*with consideration of implementation timing*)

BWRVIP Position on Reference of BWRVIP Repair Design Criteria (RDC)

- Current RDC status
 - 7 RDC reports are cited/referenced in draft R2 of the GALL
 - RDC reports have fixed BWRVIP number (revisions do not receive new BWRVIP report numbers)
 - Do not contain license renewal appendices
 - Cited in the GALL as applicable program documents, but are not specifically credited for aging management
 - Use of the RDC by the utilities is required under the NEI 03-08 initiative

BWRVIP Position on Reference of BWRVIP RDC (cont)

- Position for RDC reports
 - The RDC provide criteria for repairs, but aging management strategies for repairs are provided by the repair designer, not the BWRVIP
 - RDC references should be removed from the NUREG-1801 program descriptions. Reference should be limited to generic citation only
(Not credited for aging management)

BWRVIP Position on Reference of BWRVIP Water Chemistry Guidelines

- Current Water Chemistry Status
 - New BWRVIP number assigned for each revision of the BWR Water Chemistry Guideline
 - Guideline is updated routinely (*Interim revisions biennially, full revisions every 4 years*)
 - Cited in GALL inconsistently by BWRVIP number (BWRVIP-29 and BWRVIP-79); draft R2 references current version, BWRVIP-190
 - GALL acknowledges “later” revisions
 - **NOT** submitted to the NRC for approval

BWRVIP Position on Reference of BWRVIP Water Chemistry Guidelines (cont)

- Current Water Chemistry Status Cont.
 - Do not contain license renewal implementation guidance (LR appendix)
 - Current version is BWRVIP-190
 - October 2008
 - Interim revision in 2010
 - Full revision in 2012
 - BWRVIP-62, Hydrogen Water Chemistry Inspection Relief, is an important document that bridges water chemistry implementation and inspection program implementation. It is currently not referenced in the GALL or the draft revision. It was recently approved by the NRC.

BWRVIP Position on Reference of BWRVIP Water Chemistry Guidelines (cont)

- Current Water Chemistry Status Cont.
 - Under the NEI 03-08 Initiative, having a Strategic Plan to address the latest Water Chemistry Guidelines is “Mandatory”
 - Under the NEI 03-08 Initiative, complying with all of the Action Levels in the latest Water Chemistry Guidelines is “Needed”
 - Water Chemistry trends for BWRs over the last 10 years have shown dramatic improvement as a result of the continuous improvements to the Water Chemistry Guidelines and tightening of the requirements therein

BWRVIP Position on Reference of BWRVIP Water Chemistry Guidelines (cont)

• Position for Water Chemistry Guidelines

- References in GALL AMP descriptions and AMR tables should be made generically to the “*EPRI BWR Water Chemistry Guidelines, latest revision*”
- GALL acknowledges “later” revisions. This wording should be retained / reinforced to ensure that licensees are not required to perform change reviews
- It would be appropriate to reference BWRVIP-62 in the GALL. Revisions will be submitted to the NRC for review and approval and as such it should be referenced in a manner similar to the I&E Guidelines
- GALL should reference water chemistry guidelines and BWRVIP-62 only in the XI.M2 Water Chemistry AMP. Other AMPs should refer to the water chemistry AMP under the mitigation attribute generically, i.e. don't repeat the mitigation discussion in each AMP

BWRVIP Position on Referencing Other Important BWRVIP Support Documents

- Key support references for the BWRVIP program include:
 - BWRVIP-14 (SS CGRs)
 - BWRVIP-59 (Ni CGRs)
 - BWRVIP-60 (LAS CGRs)
 - BWRVIP-80 (Shroud Vertical Weld CGRs)
 - BWRVIP-99 (Irradiated SS CGRs)
 - BWRVIP-100 (Irradiated SS Fracture Toughness)
- Citation of these references should be in reference sections only

Summary

- BWRVIP Products play an appropriate role in Aging Management Programs
- It is appropriate to cite BWRVIP Inspection and Evaluation Guidelines that are submitted to the NRC for review and approval as effective AMPs, but the GALL and the SRP should stipulate “or latest approved version”
- It is not necessary that all the documents that support NEI 03-08 materials degradation programs be submitted to the NRC for review and approval ...providing credit for the NEI 03-08 Initiative is an efficient use of NRC and industry resources
- The BWRVIP will be providing detailed comments on draft R2 of the SRP and GALL as a part of the public comment period