



**Global Expertise • One Voice**

# Industry Plans to Address NRC Concerns Regarding Submittal of Baffle-Former Bolt Plant- Specific Evaluations

Chris Wax (APS)

Josh McKinley (Westinghouse)

NRC Public Meeting, Rockville, MD

September 12, 2018

P R E S S U R I Z E D   W A T E R   R E A C T O R   O W N E R S   G R O U P

# RAI 30 – Submittal of BFB Inspection Interval Evaluation

## **NRC RAI 30**

*EPRI's response to the Request for Additional Information (RAI) 8 indicated the interim guidance for baffle-former bolt (BFB) examinations will be incorporated in the final version of MRP-227, Rev. 1. The NRC staff assessment of the BFB interim guidance (ML17310A861) contained the following recommendation regarding the submittal of plant-specific evaluations of BFB subsequent examination interval:*

*If the table in MRP 2017-009 indicates that the subsequent inspection interval is not to exceed 6 years (e.g., downflow plants with  $\geq 3\%$  BFBs with indications or clustering, or upflow plants with  $\geq 5\%$  of BFBs with indications or clustering), the plant-specific evaluation to determine a subsequent inspection interval should be submitted to the NRC for information within one year following the outage in which the degradation was found. Any evaluation to lengthen the determined inspection interval or to exceed the maximum inspection interval recommended in MRP-2017-009 should be submitted to the NRC for information at least one year prior to the end of the current applicable interval for BFB subsequent examination. This recommendation should be incorporated into the final NRC-approved version of MRP-227, Rev. 1.*

*Please confirm that this NRC staff recommendation will be included in MRP-227, Rev. 1, or another NRC-approved industry guidance document, such as WCAP-17096-NP-A (ML16279A320) or provide a basis for not doing so.*

# Industry Perspective (1)

- Recommendation in the staff assessment contains two parts:
  - Submittal of the plant-specific BFB acceptance criteria evaluation within one year from detection of the degradation if the MRP 2017-009 threshold criteria are exceeded
  - Submittal of the plant-specific BFB acceptance criteria evaluation no less than one year before the end of the current re-inspection interval
- Both focus on determination of the re-inspection interval after inspection shows degradation of BFBs
  - MRP-227 Section 7.5 “Examination Results Requirement” becomes applicable
  - NRC-approved evaluation method needed to address inspection results (ASME Section XI, WCAP-17096-NP-A, etc.)
- MRP-227 does not set the re-examination period once degradation has been found; this is embedded in WCAP-17096-NP-A

# Industry Perspective (2)

- Appropriate location for the guidance in this recommendation is the acceptance criteria methodology (WCAP-17096-NP-A)
- BFB interim guidance (MRP 2017-009) states that it does not modify acceptance criteria of WCAP-17096-NP-A
  - Addressed under question 4 of the NRC staff assessment
  - Percentages in MRP 2017-009 are thresholds for increased scrutiny of the re-inspection interval
  - WCAP-17096-NP-A methodology must still be used
- Revision of WCAP-17096-NP-A is underway
  - Scheduled for completion in early 2019

# Industry Approach

- Include BFB evaluation submittal requirements in WCAP-17096-NP-A
- Currently have documented changes in NEI 03-08 Needed interim guidance
  - PWR Owners Group report PWROG-17071, Revision 0
  - See Section 2.3.2 of the interim guidance
  - Submitted to NRC for information on 7/12/18 (ML18204A177)
- Provides revised methodology guidance for developing BFB acceptance criteria
  - Thresholds for “typical” or “accelerated” degradation based on plant design and inspection results
  - Margin assessment and probabilistic methods included in revised approach
  - BFB interim guidance of letter MRP 2017-009 was a key input
- Included part of the requirement to submit evaluation to the NRC:

*“Note: Any plant-specific evaluation used to extend the re-inspection interval beyond those defined in MRP-2017-009 is to be submitted to the NRC for information at least one year prior to the end of the current applicable interval for BFB subsequent examination.”*

# WCAP-17096-NP-A Update

- Statement in PWROG-17071-NP interim guidance addresses second part of the recommendation from the staff assessment but not first part
- Draft of WCAP-17096-NP-A revision currently in industry review
  - Includes text to address both parts of the recommendation:  
*“Note: For those plants with “accelerated” degradation (i.e. subsequent inspection interval not to exceed 6 years per MRP 2017-009), the plant-specific evaluation used to determine the re-inspection interval is to be submitted to the NRC for information within one year following the outage in which the degradation was found. Any plant-specific evaluation used to extend the re-inspection interval beyond those defined in MRP-2017-009 is to be submitted to the NRC for information at least one year prior to the end of the current applicable interval for BFB subsequent examination.”*
- Change addresses the concerns of the staff assessment and this RAI

# Questions?

---



*The Materials Committee is established to provide a forum for the identification and resolution of materials issues including their development, modification and implementation to enhance the safe, efficient operation of PWR plants.*



**Global Expertise • One Voice**  
**[www.pwrog.com](http://www.pwrog.com)**