

Baffle-Former Bolt Degradation NRC Update

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Background

- Unexpected numbers of degraded baffle-former bolts found during initial MRP-227-A inspections in 2016 in several plants.
- Industry developed enhanced inspection recommendations.
 - NSAL 16-1 (Westinghouse)
 - EPRI MRP Interim Guidance (MRP Letter 2016-021, July 25, 2016)
- NRC completed a risk-informed assessment in 2016. (ML16225A341)
 - Concluded risk represented by degraded BFBs is acceptable if most susceptible (Tier 1a) plants examine all BFBs at next refueling outage.
- NRC also performed focused inspections of BFB inspection and corrective actions at several plants in 2016.

NRC Review of Baffle-Former Bolt Interim Guidance

- NRC reviewed two EPRI MRP Interim Guidance Letters
 - MRP 2016-021, July 25, 2016
 - Initial examination schedule for Tier 1 plants
 - MRP 2017-009, March 15, 2017
 - Initial examination schedule for all tiers
 - Limit on maximum interval for subsequent examination for all tiers
- Both submitted for information only to NRC
- Staff assessment completed November, 2017. (ML17310A861)
- Staff assessment not binding for licensees.

Conclusions of Staff Assessment

- The interim guidance with respect to initial examination schedules and maximum limits on subsequent examination intervals, provides acceptable aging management of BFBs in Westinghouse and CE-design RVI.
- Staff assessment recommended:
 - Plant-specific evaluations to exceed 6-year subsequent examination interval (for downflow plants with > 3% degraded BFBs, upflow plants with > 5 % degraded BFBs, or clustering) should be submitted to NRC within one year of the outage in which the degradation was found.
 - If the licensee later decides to revise the initial plant-specific evaluation to extend the previously determined interval, the revised evaluation 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.
- Staff recommended the above recommendation be incorporated in final approved version of MRP-227, Rev. 1.

MRP-227, Rev. 1

Consideration of Baffle-Former Bolt OE

- NRC requested additional information regarding incorporation of interim guidance into MRP-227, Rev. 1.
- Response indicates EPRI intends to incorporate the interim guidance for BFB into MRP-227, Rev. 1.
- RAI response indicated evaluations to exceed 6 year subsequent examination schedule would be submitted to NRC within one year, or within 90 days of completion of the evaluation if completed after one-year timeframe.
- NRC is considering SE condition consistent with recommendation of BFB staff assessment.

Future NRC Actions

- Approved version of MRP-227, Rev. 1 will constitute formal guidance on BFB examinations.
- Continue to monitor OE related to BFB examinations.
- Continue to monitor BFB examinations and corrective actions through the inspection process.
- NRC is considering best process to ensure adequate monitoring.