



NRC Suggested Focus Topics

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Materials Analysis

- Objective: Ensure that PBMR metallic component performance is well-understood and quantified
- Issue:
Potential reduction in metallic component creep and fatigue lives due to impurities in the helium coolant and creep-fatigue interactions
- References:
 - Letter from NRC to Exelon, dated May 31, 2002, Request for Additional Information (RAIs) on High Temperature Materials Graphite; Control of Chemical Attack; and Design Codes and Standards for the Pebble Bed Modular Reactor (PBMR)
 - SECY-03-0059, NRC's Advanced Reactor Research Program, Attachment 2, IV.2.4, Materials Analysis

PRA Methods and Quality

- Objective: Ensure that PRA methodology and quality provide a sound basis for the PBMR licensing approach and DCA regulatory decisions
- Issues/Background:
 - Existing PRA quality guidance is primarily focused on current LWRs
 - PRA methods/quality standards and guidance in a number of reactor technology areas are evolving
 - NRC's technology-neutral framework is under development and is not a regulation; meeting it's principles and criteria although beneficial, will not provide an adequate basis to justify PBMR DCA risk-informed regulatory decisions
 - Proposed exemptions from existing LWR requirements may involve risk-insights as justification
- References:
 - Letter from NRC to Exelon, dated March 26, 2002, NRC Staff's Preliminary Findings Regarding Exelon Generation's Proposed Licensing Approach for the Pebble Bed Modular Reactor
 - RG 1.174, RG 1.200, SRP Chapter 19, and SRP Chapter 19.1