

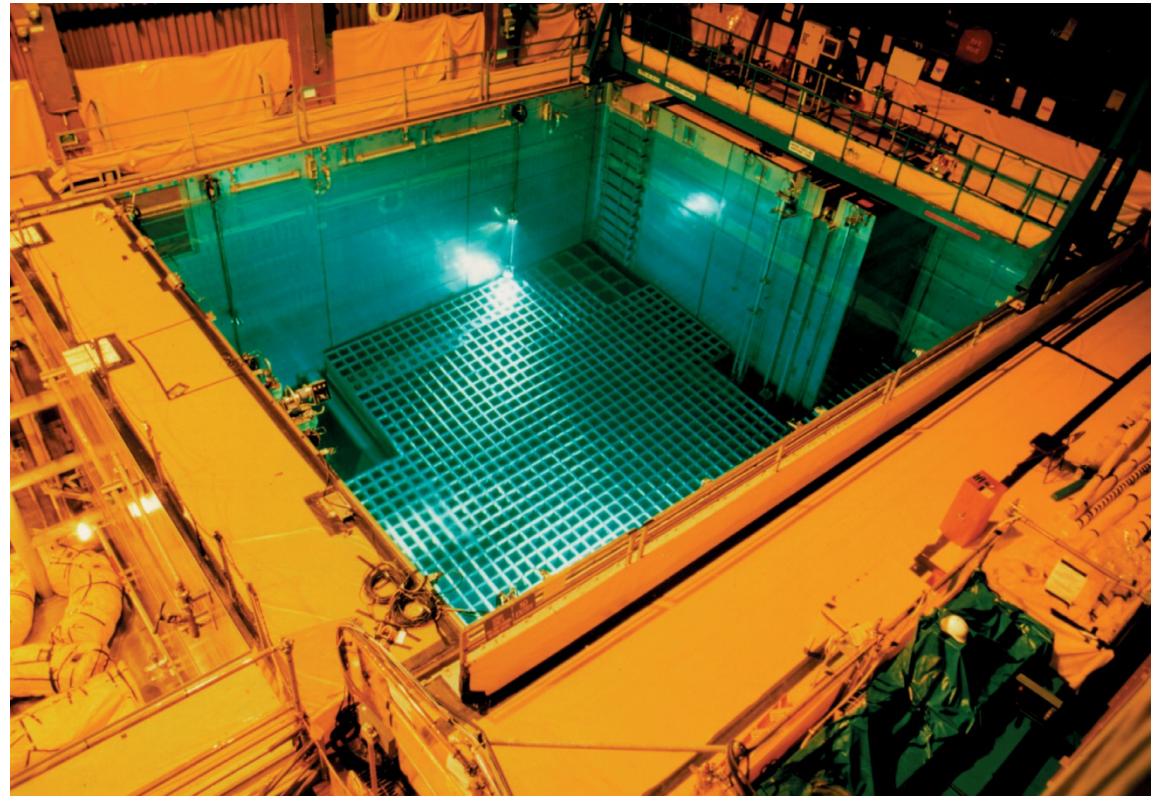


Public Meeting: Neutron Absorbing Material Degradation Issues

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Overview

- Regulatory perspective
- Operating Experience
- NRC Actions
- Research Plan
- Path forward



Picture: Spent Fuel Pool



Regulatory Perspective

- Unidentified and unmitigated degradation poses a criticality and safety concern
- Challenges compliance with NRC subcriticality requirements: 10 CFR 50.68 and GDC 62
- GL-78-11 dated April 14, 1978
 - Suggested an inservice surveillance program
 - Verification of long-term stability by actual tests
- Monitoring program important to ensure subcriticality
 - In-situ testing (neutron attenuation)
 - Coupon surveillance (physical characteristics, visual, neutron attenuation)
 - Conservative prediction of future degradation



Operating Experience

- Historical
 - Boraflex
 - BORAL®
- Recent
 - Carborundum
 - BORAL®
- Surveillance methodology and interval important to detect onset of degradation



NRC Actions

- Completed actions
 - IN 2009-26 on recent material degradation events
 - Finalize LR-ISG 2009-01
- Current actions
 - Make the regulatory process on the neutron absorbing materials in the SFP more streamlined and predictable
 - Developing a research plan to address issues



Research Areas

- Literature knowledge base
- Confirmatory research on the surveillance methodology
- Confirmatory research on the surveillance interval adequacy
- Living knowledge base based on the previous areas



Path Forward

- Dialogue with the industry on its next steps
- Additional research to understand degradation mechanisms
- Regulatory guidance, as necessary
- Other generic communications, as necessary



Questions