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Long-Term Core Cooling (LTCC) Issues

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USNRC Public Meeting
On Proposed 10 CFR 50.46c Rule

Purpose

The purpose of this presentation is to request clarity with regards to long-term core cooling (LTCC).

Agenda

- Evaluation Methods for LTCC
- Limits
- Decay Heat Standard
- Compliance
- Summary

Evaluation Methods for LTCC

- GSI-191 versus boric acid precipitation
- Deterministic vs Risk-Informed methods
 - Application of the transition break size
 - Graded approach
- Codes
 - Use of realistic LOCA assumptions / methods
- Reg Guide

Limits for LTCC

- NRC Question 3
- Performance-Based versus Prescriptive Limit
- Cladding embrittlement, Breakaway Oxidation
 - 2200°F (1200°C)
 - 1832°F (1000°C)
 - 1202°F (650°C)
 - 800°F (427°C)
- Testing and test procedures

Decay Heat Standard

- Deterministic Methods
 - 10 CFR 50.46 Appendix K: 1971 Standard + 20%
- Realistic Methods
 - Use of a more appropriate decay heat standard: 1979 +2 sigma or equivalent

Compliance

- Should compliance with LTCC be separated from compliance with other parts of the rule?
- Lack of definition of the rule in this area could lead to requests for exemptions?

Summary

PWROG considers the aspects discussed herein to be important for members in establishing actions to demonstrate compliance