



10 CFR 50.46c Proposed Rule Public Meeting: NRC Opening Presentation

July 23, 2014



Meeting Purpose

- Discuss key elements of the 10 CFR 50.46c proposed rule, specific to boiling water reactors (BWRs), as identified during the June 24-26, 2014 public meeting
- Enhance stakeholder understanding of the proposed rule to inform formal comments on the proposed rule
 - Comment period ends on August 21, 2014



Meeting Purpose (cont'd)

- NRC will not be providing formal comment responses to any oral comments made at this meeting
 - Staff will consider oral comments made in developing the final rule and guidance



Rulemaking Purpose

- Revise emergency core cooling system (ECCS) acceptance criteria to reflect recent research findings
- Replace prescriptive analytical requirements with performance-based requirements
- Expand applicability to all fuel designs and cladding materials
- Address concerns raised in two petitions for rulemaking (PRMs): PRM-50-71 and PRM-50-84
- Allow an alternative risk-informed approach to evaluate the effects of debris on long-term cooling
 - This objective was added by SRM-SECY-12-0034, “Proposed Rulemaking – 10 CFR 50.46c: Emergency Core Cooling System Performance During Loss of Coolant Accidents (RIN 3150-AH42)” dated January 7, 2013 (Agencywide Document Access and Management System (ADAMS) Accession No. ML13007A478)

Treatment of Debris

50.46c(d)(2) ECCS Performance Demonstration

*(iii) Core geometry and coolant flow. The ECCS evaluation model must address calculated changes in core geometry and must consider those factors, **including debris**, that may alter localized coolant flow in the core or inhibit delivery of coolant to the core. A licensee may evaluate effects of debris using a risk-informed approach to demonstrate long-term ECCS performance, as specified in paragraph (e) of this section.*

- Deterministic treatment of debris in short-term performance demonstration (i.e., peak cladding temperature, integrated time at temperature, breakaway).
- Deterministic or risk-informed approach in long-term performance demonstration.

Possible impacts of debris on BWR short-term performance demonstration need to be identified and addressed.



Compliance Schedule

50.46c(o) Implementation

- BWR/4-6 compliance demonstration due 24 months after effective date of rule (~2018).
- BWR/2 compliance demonstration due 48 months after effective date of rule (~2020).
- BWR/3 compliance demonstration due 60 months after effective date of rule (~2021).

Possible conflicts between 50.46c implementation and resolution of BWR debris issues need to be recognized.



Next Steps

- 150-day public comment period closes on August 21, 2014
- Address public comments
- Develop final rule
 - Due to the Commission in February 2016 (per SRM-COMSECY-13-0006)
- In parallel:
 - Develop implementation guidance for the risk-informed treatment of debris on long term core cooling



Questions?

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