

April 26, 2002

MEMORANDUM TO: Michael T. Lesar, Chief
Rules and Directives Branch
Division of Administrative Services
Office of Administration

FROM: David B. Matthews, Director */RA/ F. Gillespie for*
Division of Regulatory Improvement Programs
Office of Nuclear Reactor Regulation

SUBJECT: RESOLUTION STATUS OF PETITION FOR RULEMAKING PRM 50-71

On March 14, 2002, a Petition Review Board (PRB) meeting was convened by the Office of Nuclear Reactor Regulation (NRR) to review a Petition for Rulemaking, PRM-50-71. This petition was filed by the Nuclear Energy Institute (NEI) and docketed by the U.S. Nuclear Regulatory Commission (NRC) on April 12, 2000. In essence, NEI has requested that the NRC amend its regulations in 10 CFR 50.44 and 50.46, to allow nuclear power plant licensees to use zirconium-based cladding materials other than zircaloy or ZIRLO, without obtaining exemptions.

At a previous PRB meeting held on the April 3, 2001, the PRB members agreed that there were no safety issues needing to be addressed by the requested rulemaking. In addition, the reduction in regulatory burden and increased NRC efficiency and effectiveness associated with eliminating the need to process license exemptions would be minimal. As a result of these considerations, the NRR meeting participants acknowledged that any rulemaking alternative would likely be afforded a very low priority in NRR. Consequently, the PRB decided that it would be better to deny the petition because of priority and budgetary reasons rather than to let it remain open for an indefinite period.

Subsequently, as part of SECY-01-0133, "Status Report on Study of Risk-Informed Changes to the Technical Requirements of 10 CFR (Option 3), and Recommendations on Risk-Informed Changes 10 CFR 50.46 (ECCS Acceptance Criteria)," dated July 23, 2001, the staff recommended that rulemaking be undertaken to replace the current prescriptive ECCS acceptance criteria in 10 CFR 50.46 with a performance-based requirement. This requirement would, one, demonstrate adequate post-quench cladding ductility and adequate core-coolant flow area to ensure that the core remains amenable to cooling, and two, for the duration of the accident, maintain the calculated core temperature at an acceptably low value and remove decay heat. Use of a such a performance-based requirement rather than the current prescriptive criteria would allow use of cladding materials other than zircaloy or ZIRLO without licensees having to submit exemption requests.

In light of this, the PRB met on March 14, 2002, and reconsidered the petition. A copy of the meeting summary is attached. As a result of the PRB's direction, the staff plans to proceed as follows:

- (1) Initiate rulemaking to add the previously approved cladding, M-5, to the materials cited in 10 CFR 50.46. This rulemaking, if completed, would grant the petition in part because it would allow licensees to use M-5 without obtaining exemptions. Direct final rulemaking is preferable. It is also preferable to initiate rulemaking without preparing a rulemaking plan. We plan to prepare a Commission paper (or memorandum) on this item.
- (2) Defer consideration of the broader question to the risk-informed initiative discussed in SECY-01-0133. In SECY-01-0133, the staff recommended rulemaking to replace the current prescriptive ECCS acceptance criteria in 10 CFR 50.46 with a performance-based requirement. This change, if completed, may grant the petition in a more general sense. The staff discussed this matter further in SECY-02-0057, "Update to SECY-01-0133, Fourth Status Report on Study of Risk-Informed Changes to the Technical Requirements of 10 CFR Part 50 (Option 3) and Recommendation on Risk-Informed Changes to 10 CFR 50.46 (ECCS Acceptance Criteria)," dated March 29, 2002.
- (3) In a separate rulemaking, the staff is already proceeding to make several changes to the hydrogen control provisions of 10 CFR 50.44. One of the proposed changes is to eliminate the specification of "zircaloy or ZIRLO" cladding, because such a specification is not needed in 10 CFR 50.44. This change, by itself, would not allow licensees to use alternative cladding materials without obtaining an exemption. However, it would clear the path for Items (1) and (2) above to have that effect.

Attachment: Meeting Summary

cc: W. Travers, EDO

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Attachment: Meeting Summary

cc: W. Travers, EDO

Accession Number: ML021150437 (package)

Memo: ML020920497

Meeting Summary: ML021130369

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