



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

April 11, 2024

SECRETARY

MEMORANDUM TO: Raymond V. Furstenau
Acting Executive Director for Operations

FROM: Carrie M. Safford, Secretary

SUBJECT: STAFF REQUIREMENTS – SECY-16-0033 – DRAFT FINAL
RULE – PERFORMANCE-BASED EMERGENCY CORE
COOLING SYSTEM REQUIREMENTS AND RELATED FUEL
CLADDING ACCEPTANCE CRITERIA (RIN 3150-AH42)

Since SECY-16-0033 was provided to the Commission in 2016, the landscape surrounding advanced light-water reactor fuel has changed. The approaches described in the paper should be reconsidered under the current context, including consideration of topics such as accident tolerant fuel, increased enrichment, and higher burnup. Therefore, under the Internal Commission Procedures, Chapter III, page 14, the Commission is returning this paper to the staff without Commission action.

1. The staff should apply an appropriate risk-informed regulatory approach to address the research findings on cladding embrittlement effects under loss-of-coolant accident (LOCA) conditions described in SECY-16-0033.
2. The staff should evaluate Item 1 with other associated technical issues being addressed, such as fuel fragmentation relocation and dispersal, and risk-informed treatment of LOCAs, including the draft final 50.46a that had been provided in SECY-10-0161.
3. The staff should evaluate whether specific emergency core cooling system criteria such as cladding temperature should be codified or instead addressed in regulatory guidance.
4. Within six months of the date of this SRM, the staff should provide, through a Commissioner Assistant's Note, an action plan for the above items.

cc: Chair Hanson
Commissioner Wright
Commissioner Caputo
Commissioner Crowell
OGC
CFO
OCA
OPA
ODs, RAs, ACRS, ASLBP
PDR