



SECRETARY

UNITED STATES  
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

April 16, 1997

IN RESPONSE, PLEASE  
REFER TO: M970325

MEMORANDUM TO: L. Joseph Callan  
Executive Director for Operations

FROM: *Annette L. Vietti-Cook*  
Annette L. Vietti-Cook, Acting Secretary

SUBJECT: STAFF REQUIREMENTS - BRIEFING ON HIGH BURNUP  
FUEL ISSUES, 10:00 A.M., TUESDAY, MARCH 25,  
1997, COMMISSIONERS' CONFERENCE ROOM, ONE  
WHITE FLINT NORTH, ROCKVILLE, MARYLAND (OPEN  
TO PUBLIC ATTENDANCE)

The Commission was briefed by the NRC staff on the issues and concerns related to the use of high burnup fuel in U.S. commercial reactors. Since the impact of these issues crosses numerous program offices, the staff should assign a primary point of contact with responsibility for integrating the related activities within the NRC.

(EDO)

(SECY Suspense: 4/25/97)

The staff should assess the effects of high burnup fuel on the adequacy of the regulatory guidelines and licensing criteria. This assessment should cover not only reactivity insertion accidents but the design basis accidents such as a loss of coolant accident. The staff should identify the issues that would need to be addressed associated with transportation, storage, and long-term geologic burial of higher burnup fuels. The staff should ensure that the 10 CFR 50.59 and Millstone and Maine Yankee lessons learned recommendations related to licensing bases are adequate to capture the necessary issues related to fuel design.

(EDO)

(SECY Suspense: 6/30/97)

The fuel assembly structure was originally designed to withstand the loads associated with a loss of coolant design basis accident (double-ended guillotine rupture of a cold or hot leg pipe - (LBLOCA)). The staff should identify plants, if any, which when considering high burnup experience, can not meet design basis LBLOCA loads. Where these design loads have been relaxed for the fuel assembly structure, provide the Commission the rationale for such relaxations.

(EDO)

(SECY Suspense: 5/2/97)

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The staff should continue its cooperation with the industry and in international research activities in order to establish appropriate limits for high burnup fuel in reactivity insertion accidents, and to ensure that NRC has the appropriate research and other tools in place to address emerging issues that relate to core and fuel designs and plant operations.

cc: Chairman Jackson  
Commissioner Rogers  
Commissioner Dicus  
Commissioner Diaz  
Commissioner McGaffigan  
OGC  
CFO  
CIO  
OCA  
OIG  
Office Directors, Regions, ACRS, ACNW, ASLBP (via E-Mail)  
PDR - Advance  
DCS - P1-24