



50-309

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20585-0001

October 17, 1996

Mr. Charles D. Frizzle, President
Maine Yankee Atomic Power Company
329 Bath Road
Brunswick, ME 04011

SUBJECT: RESOLUTION OF SPENT FUEL STORAGE POOL SAFETY ISSUES: ISSUANCE OF FINAL STAFF REPORT AND NOTIFICATION OF STAFF PLANS TO PERFORM PLANT-SPECIFIC, SAFETY ENHANCEMENT BACKFIT ANALYSES, MAINE YANKEE ATOMIC POWER STATION (TAC NO. M88094)

Dear Mr. Frizzle:

The Nuclear Regulatory Commission staff recently completed a detailed review of spent fuel storage pool safety issues. The results of the staff's review are documented in a report to the Commission which is enclosed for your information. In the report, the staff concludes that existing structures, systems, and components related to the storage of irradiated fuel provide adequate protection of public health and safety.

Notwithstanding this finding, the staff has also identified certain design features that reduce the reliability of spent fuel pool decay heat removal, increase the potential for loss of spent fuel coolant inventory, or increase the potential for consequential loss of essential safety functions at an operating reactor. The staff intends to conduct plant-specific regulatory analyses to evaluate potential safety enhancement backfits pursuant to 10 CFR 50.109(a)(3) at a number of operating plants that possess one or more of these design features.

The NRC staff determined through a review of spent fuel pool design information that Maine Yankee has a fuel transfer tube that penetrates the spent fuel pool (SFP) wall at an elevation below the top of fuel stored in the SFP racks. During refueling periods when the blank flange on the containment side of the transfer tube is removed, improper operation of the spent fuel transfer system or the SFP cooling and cleanup system could lead to a loss of coolant inventory from the SFP to the refueling cavity inside the containment through the transfer tube. The staff concludes that the relative rarity of fuel transfer systems lacking passive design features to prevent uncover of stored fuel warrants a more detailed review of the design features and administrative controls at the operating reactors that have this characteristic. The staff will perform regulatory analyses of your plant to determine if any safety enhancement backfits related to this design feature are justified under current guidance.

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Mr. Charles D. Frizzle

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If you wish to comment on the accuracy of the staff's understanding of the plant design, the safety significance of the above design features, the cost of potential modifications to address the above design features, or the existing protection from the above design concerns which may be provided by administrative controls or other means, comments received before November 15, 1996, will be considered in developing plans for inspections and other activities associated with the planned regulatory analysis.

If you have any questions regarding this matter, please do not hesitate to contact me at (301)415-1429.

Sincerely,

(Original Signed By)

Daniel H. Dorman, Project Manager
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Docket No. 50-309

Enclosure: Memo to the Commission, from
J. Taylor, "Resolution of Spent Fuel
Storage Pool Action Plan Issues,"
dated July 26, 1996

cc w/encl: See next page

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