March 23, 2001

Edwin S. Lyman, Ph.D.
Scientific Director
Nuclear Control Institute
1000 Connecticut Ave, NW, Suite 804
Washington, DC 20036

SUBJECT: DUCTILITY OF FUEL CLADDING

Dear Dr. Lyman:

Thank you for expressing your concerns about the ductility of Framatome's M5 fuel cladding (February 23, 2001, e-mail to Mr. Ralph Meyer of the NRC's Office of Nuclear Regulatory Research).

The NRC staff requested public meetings with Framatome and Westinghouse when it determined that a technical paper by Mr. Bohmert entitled, "Embrittlement of ZrNb1 at Room Temperature After High-temperature Oxidation in Steam Atmosphere," *(Nuclear Engineering and Design*, Volume 147, No. 1, Page 53, Comparative Studies on High-Temperature Corrosion of ZrNb1 and Zircoloy-4) may be applicable to these vendors' cladding material, M5 and Zirlo, respectively. The public meeting with Framatome was held on February 23, 2001, and the public meeting with Westinghouse was held on February 26, 2001. After reviewing the information presented at the public meetings, the staff is satisfied that the currently-licensed 17 percent clad oxidation criterion for loss-of-coolant accident conditions continues to be appropriate for M5 and Zirlo. The staff's conclusions from these meetings are described in the meeting summaries (ADAMS Accession Number ML010740359 for Framatome and ML010740380 for Westinghouse) and the staff's letters to the vendors (ADAMS Accession Number ML010740395 for Framatome and ML010740416 for Westinghouse).

If you have any questions about the staff's conclusions, please contact Mr. Ralph Caruso at (301) 415-1813 or via e-mail at rxc@nrc.gov. Thank you again for your interest in this issue.

Sincerely,

/RA/

Stephen Dembek, Chief, Section 2
Project Directorate IV and Decommissioning
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Project Nos. 693 and 700

cc: See next page

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