



General Electric Company
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Dial Comm:

August 4, 1992
MFN-154-92
JFK92-024

Document Control Desk
U.S. Nuclear Regulatory Commission
Washington, DC 20555

SUBJECT: Marathon Control Rod Stress Criteria Clarification

REFERENCE: *GE Marathon Control Rod Assembly*, NEDE-31758P-A, October 1991

The purpose of this letter is to clarify a statement made in the NRC Safety Evaluation of the reference report concerning the stress limit used by GE.

In Section 4.1.2 of the reference report, GE states, "The Design Ratio must be less than or equal to 1.0. ... Conservatism is included in the evaluation by limiting stresses for all primary loads to one-half of the ultimate (i.e., a safety factor of two is employed)." In the response to question 1c transmitted in J. S. Charnley's September 14, 1990 letter to the NRC, GE stated,

"The ultimate tensile strength for the absorber tubes is 75 ksi minimum at room temperature and 55 ksi minimum at 550 degrees-F, consistent with 304 stainless steel values per ASME Code Section III. All structural analyses are conservatively based on unirradiated strength properties."

To summarize, the GE stress limit criteria requires the Design Ratio to be less than or equal to 1.0 with all stresses due to primary loads limited to one-half of the ultimate stress where the ultimate stress is consistent with 304 stainless steel values per ASME Code, Section III.

In Section 3.1 of the U. S. NRC Technical Evaluation Report (TER) dated June 19, 1991, it is stated, "To assure that the Marathon control rod does not fail, GE has established a stress limit per American Society of Mechanical Engineers (ASME) Code, Section III ..., on the materials used in this design." The need for clarification arises from the words "stress limit per ASME Code, Section III." GE does not use the ASME stress limit criteria nor has GE knowingly represented such to be the case. We believe the intent of this statement in the TER was to identify the source

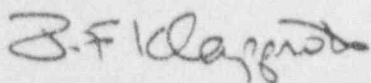
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of the ultimate stress used by GE, not to identify the stress limit criteria used by GE.

To avoid any current or future misunderstanding with respect to the stress limit criteria, NRC concurrence with the GE clarification is requested by September 30, 1992.

Sincerely,



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