DOCKET NUMBER
PROPOSED RULE PR-Misc Notice (Reg. Guide)

GENERAL ELECTRIC

NUCLEAR FUEL MANUFACTURING DEPARTMENT

GENERAL ELECTRIC COMPANY - P. O. BOX 780 - WILMINGTON, NORTH CAROLINA 28402

DOCKETED USNRC

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OFFICE OF SECRETARY DOCKETING & SERVICE BRANCH

September 27, 1985

Secretary of the Commission
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Attention: Docketing & Service Branch

Gentlemen:

Reference: Proposed Revision 1 to Regulation Guide 3.52
(Task CE 308-4)

General Electric Company Nuclear Fuel Manufacturing Department has reviewed the subject Draft Regulatory Guide and Value/Impact Statement dated July 1985, and offers the attached comments relative to criticality safety.

Should additional information be required, please contact me.

Very truly yours,

GENERAL ELECTRIC COMPANY

Charles M. Vaughan

Charles M. Vaughan, Manager
Regulatory Compliance
M/C J26

CMV:bsd
Attachment

D309 add Ed Hurt, 113055

OCT 03 1985

Acknowledged by card

GENERAL ELECTRIC

Secretary of the Commission
September 27, 1985

ATTACHMENT

General Electric Company Nuclear Fuel Manufacturing Department offers the following comments relative to Chapter 4, Chapter 14 and Appendix B of:

PROPOSED REVISION 1 TO REGULATORY GUIDE 3.52
Task CE 308-4 Dated July 1985

Draft Regulatory Guide Wording	GE Comments
Section 4.1.5 Its requirements for posting criticality safety limits at each location where SNM is processed, handled, stored, or transported. ...	Proposed wording: Its requirements for posting criticality safety limits at locations where SNM is processed, handled, storage or transported. ...
Section 4.2.3 Describe calculational methods that have been validated and will be used. The description should include, as applicable, the range of applicability, bias, cross-section sets, definition of terms, and other pertinent information.	GE recommends including guidelines for how new methods should be validated, etc. as well as including a practical example of such a validation.

Draft Regulatory Guide Wording	GE Comments
Section 14.3:	
... A justification of criteria for spacing between units in process and storage areas should be provided.	This section needs clarification as to what is meant by criteria for spacing between units in storage arrays.
Appendix B, Page 38, first paragraph in Section 1:	
... Acceptable geometry margins of safety for large single units are 90 percent of the minimum critical cylinder diameter, ...	These instructions should call for justification of safety margins - not specify them.
Page 39:	
Δk_u = the uncertainty in the benchmark experiments, including random and systematic errors (bias) within the range of parameters encountered in the equipment design.	As this data is not generally available, the instruction should only specify that justification should be given for treatment of this term.
Δk_m = the value required to ensure an acceptable margin of subcriticality. In the absence of information that justifies a smaller margin of safety, a value of 0.05 should be assumed for Δk_m in equipment design.	The instruction should not specify a value but should only call for justification of the margin used.

Draft Regulatory Guide Wording	GE Comments
Page 39, Section 2.d:	
The array analysis should include a conservative allowance for spatial tolerance in unit positions.	An example of this would be useful.
Page 40, paragraph a:	
Validated KENO calculations should yield a maximum k_{eff} of 0.95 at the 95 percent confidence level.	o The instruction should only call for justification of limits, not specify values. o Practical examples of how to justify such limits should be included.
Page 40, paragraph c:	
The nuclear criticality safety criteria for arrays may be based on the application of the solid angle method. The method of analysis should be demonstrated to be applicable to the system being analyzed.	A practical example of how to demonstrate this should be given.

C. M. Vaughan
WCP:bsd