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BWR PROJECTS DEPARTMENT

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November 8, 1976

Letter no. 780-400-76
MLF 375-76

Advisory Committee on Reactor Safeguards
ATTN: G.R. Quittschreiher
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

SUBJECT: REGULATORY GUIDE 1.97, REVISION 1, "INSTRUMENTATION FOR LIGHT-WATER-COOLED NUCLEAR POWER PLANTS TO ASSESS PLANT CONDITIONS DURING AND FOLLOWING AN ACCIDENT," DATED SEPTEMBER 24, 1976

Gentlemen:

The General Electric Company has reviewed Regulatory Guide 1.97 and respectfully submits the comments herein documented.

Recent positions adopted by the USNRC and the ACRS, such as the exclusion of backup instrumentation, have resulted in a significantly improved Regulatory Guide. However, the guide is not absolutely representative of the design basis on post accident instrumentation for plants currently under regulatory review. For example, paragraph C.2 item (3) specifies that the reactor coolant pressure range be extended to three times the design pressure. This provision is well beyond the worst case calculated pressure for which GE pressure measurement instrument range is based. Although many of the requirements presented by the guide are worthwhile objectives, General Electric believes that in the absence of any safety deficiencies, a Regulatory Guide should represent to a high degree current industry practice. In view of this policy and other cost versus benefit considerations, GE suggests that the guide should reflect more temperate requirements.

Other specific comments are documented in attachment one to this letter. General Electric extends its appreciation to the ACRS and the USNRC for their full consideration of these comments.

Sincerely,

Glenn G. Sherwood

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GGS:RJM:rhw

Attachment

GENERAL ELECTRIC COMMENTS ON REGULATORY GUIDE 1.97, REVISION 1, "INSTRUMENTATION FOR LIGHT-WATER-COOLED NUCLEAR POWER PLANTS TO ASSESS PLANT CONDITIONS DURING AND FOLLOWING AN ACCIDENT", dated September 24, 1976.

1. Paragraph B-8

   a. Recommendation:
   General Electric recommends that the USNRC rescind paragraph B-8.

   b. Justification
   Upgrading "normal power plant instrumentation" would not necessarily improve the safety of the plant. Upgrading "normal power plant instrumentation" would not significantly improve the capability of the plant to accomodate a postulated event. The negligible increase in safety is not justified in view of the costs and design impact that this requirement could have. Essential instrumentation is discussed in paragraphs, B 5, B 6 and B 7, while backup instrumentation is discussed in paragraph B 9. Normal power plant instrumentation is outside the scope of the guide, and it is unnecessary to address the upgrading of normal power plant instrmentation since any upgrading necessary to assure the functionality of essential instrumentation is implicitly covered in the text of paragraphs B 5, B 6 and B 7.

2. Paragraph C-1

   a. Recommendation:
   General Electric recommends that the USNRC incorporate a footnote to reference two, regulatory guide 1.70, which reads as follows:

   "ATWS event is excluded:

   b. Justification
   The ATWS event has not as yet been properly bounded. Although the ATWS event has been removed from the guide, the ATWS event is listed as one of the events in chapter 15 of regulatory guide 1.70, revision two. When the treatment of ATWS is clarified, appropriate words should be added to regulatory guide 1.97 and the guide re-reviewed by the industry in light of ATWS developments.

3. Paragraph C.2

   a. Recommendation:
   General Electric recommends that the USNRC rescind item (2) of paragraph C.2.

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b. Justification:
Item (2) specifies an absolute value for the radiation level inside the containment. Radiation levels inside the containment depend upon a number of variables, for example containment size and configuration, and therefore can be well below the 10^8 rads per hour specified in item (2) of paragraph C.2. The BWR 6 Mark III radiation levels are calculated at approximately 4×10^5 rads per hour.

4. Paragraph C-2, Item (4)

a. Recommendation:
General Electric recommends that the USNRC replace the word "plant" in item (4) of paragraph C-2 with the following phrase, "primary and secondary containment and other seismic category I buildings".

b. Justification:
Monitoring systems for measuring releases from non-seismic category I structures, such as the turbine building and rad waste building can not by definition meet several of the requirements of regulatory guide 1.97, for example the single failure criterion.

5. Paragraph C.1

a. Recommendation:
General Electric recommends that the phase, "For each postulated accident.," in paragraph C.1 be replaced with the following phrase:

"For each 'worst case' accident..."

b. Justification:
Table 15-1 of regulatory guide 1.70, revision two, lists initiating events for both transients and accidents. Further only a few of the accidents listed in table 15-1 represent worst case conditions for all the events listed. Thus GE believes it would be repetitious to analyze each event for post accident monitoring requirements.