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SHERWOOD,G.G. General Electric Co.
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DENISE,R.P. Assistant Director for Environmental Technology

SUBJECT: Responds to Commissioners request on interim hydrogen control measures.Superior BWR accident prevention capability would prevent occurrence of core uncovery event w/heatup & generation of hydrogen.

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May 20, 1980

Richard P. Denise
Acting Assistant Director for Reactor Safety
Division of Systems Safety
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Dear Mr. Denise:

SUBJECT: RESPONSE TO COMMISSION REQUEST ON INTERIM HYDROGEN CONTROL MEASURES

References:
1) Denise, R. P. letter to A. Philip Bray, April 8, 1980
2) Sherwood, G. G. letter to J. F. Ahearne, "The BWR Perspective on Interim Hydrogen Control Measures", April 21, 1980

Reference 1 indicated that in the meeting with the NRC Commissioners on March 19, 1980, General Electric was requested to provide its views on Mark I and II containment inerting, including any calculations which differ from those provided by the NRC staff in the memo SECY-80-107, "Proposed Hydrogen Control Requirements for Small Containments". General Electric's response was provided in the Reference 2 memorandum which furnished comments on the NRC staff memo, thereby documenting the bases for GE's objection to a requirement for interting Mark I and II containments.

It was noted in Reference 1 that the staff was not aware of any fundamental disagreement between the results of GE's calculations and those of the staff on hydrogen concentrations and hydrogen combustion in a noninerted BWR containment building. If it is postulated that significant quantities of hydrogen are generated as a result of a severe accident, the GE calculations of resulting containment pressures do not differ significantly from those of the staff.

However, GE believes that the superior BWR accident prevention capability would prevent the occurrence of a core uncovery event and the attendant

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core heatup and generation of hydrogen. The GE BWR accident prevention capabilities were highlighted in Reference 2. Other fundamental GE disagreements with the staff position are enumerated in detail in Reference 2 and include:

1. The lack of consideration of the risks associated with inerting.

2. The improper assessment of the benefits of inerting.

3. The lack of recognition of significant BWR unique distinctions.

4. The use of arbitrary acceptance limits in considering an inerting requirement for Mark I and II.

5. The recommendation of inerting as the only acceptable mitigating approach.

It has been General Electric's recommendation that detailed evaluations to address the overall issue of hydrogen control requirements be established through a disciplined process, such as the rulemaking procedures on design features for core-damage and core-melt accidents recommended by the TMI-2 Lessons Learned Task Force. General Electric feels strongly that actions to inert Mark I and II containments in advance of such actions would be premature and counterproductive to safety.

Very truly yours,

RHBuchholz for

Glenn G. Sherwood, Manager
Safety and Licensing Operation

GGS:mm/1608-09

cc: W. R. Butler
H. R. Denton
R. J. Mattson