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POLICY ISSUE
(Information)

October 1, 1991

SECY-91-309

For: The Commissioners

From: James M. Taylor
Executive Director for Operations

Subject: DRAFT SAFETY EVALUATION REPORT ON THE GENERAL ELECTRIC BOILING WATER REACTOR DESIGN COVERING CHAPTER 19 OF THE STANDARD SAFETY ANALYSIS REPORT, "RESPONSE TO SEVERE ACCIDENT POLICY STATEMENT"

Purpose: To inform the Commission of the staff's intent to issue Chapter 19 of the draft safety evaluation report (DSER) on the General Electric Company's (GE's) advanced boiling water reactor (ABWR) design. The staff's DSER addresses open items needing closure as identified by the staff's review of Chapter 19 of GE's Standard Safety Analysis Report (SSAR).

Background: In SECY-91-153, "Draft Safety Evaluation Report on the General Electric Company Advanced Boiling Water Reactor Design Covering Chapters 1, 2, 3, 4, 5, 6, and 17 of the Standard Safety Analysis Report," the staff discussed the ABWR review process and the Commission guidance that it is following.

Discussion: The enclosed DSER addresses the ABWR Probabilistic Risk Assessment (PRA) discussed in SSAR Sections 19.1 through 19.6 and Appendices 19D, 19E, 19H, 19I and 19J. The issuance of this report, will facilitate the resolution of a number of open items identified by the staff's review. The staff is continuing its review of Chapter 19 and will issue supplements to this DSER to document the review and evaluation of the appendices not presently included.

This DSER focuses significant attention on the quality of the ABWR PRA rather than on insights developed from the PRA. The staff believes that knowledge of how PRA insights were employed in the ABWR design underscores the significance of design features

NOTE: TO BE MADE PUBLICLY AVAILABLE
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which eliminate dominant contributors to the estimated core damage frequency and offsite consequences, and facilitates a balancing of preventive and mitigative design features. In its remaining review of the SSAR, the staff will include an assessment of (1) how GE used PRA insights in the ABWR design process, (2) what ABWR design features, if any, GE included as a result of PRA insights to reduce risk significant sequences and phenomena, (3) how GE factored plant operating experience into the ABWR PRA, and (4) how GE used PRA insights to address severe accident phenomena.

The staff is currently engaged in dialogue with GE to reach closure on open items which have been identified from the staff's review of other ABWR SSAR chapters. The staff believes that resolution of some open items may be advanced by the PRA and has begun an examination of these open items using PRA insights. The staff also expects GE to employ PRA insights to support issue resolution.

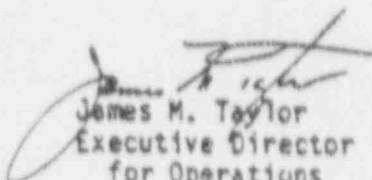
The staff will provide copies of this DSER to the Advisory Committee on Reactor Safeguards.

Conclusion:

The staff concludes that the enclosed DSER contains no new policy issues. However, GE has not provided sufficient information in many areas to allow the staff to assess the reasonableness of the ABWR risk estimates and the effect of certain severe accident phenomenological issues. In writing the final safety evaluation report for the ABWR, the staff will discuss the status of all issues including those issues previously open, but subsequently resolved.

Senior NRR technical staff plan to meet with GE at San Jose on October 8, 9 and 10, 1991 to discuss the issues identified in this DSER. The staff plans to issue this DSER by October 4, 1991 to facilitate those discussions. The staff would also place the enclosed DSER in the NRC Public Document Room at that time.

Coordination: The Office of the General Counsel has reviewed this paper and has no legal objection.


James M. Taylor
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for Operations

Enclosure:
DSER Chapter 19

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