

GENERAL ELECTRIC COMPANY

DOCKET NO. STN 50-447

GESSAR II BWR/6 NUCLEAR ISLAND DESIGN

FINAL DESIGN APPROVAL (FDA)

Final Design Approval No. FDA-1


Amendment No. 1

- (1) The General Electric Company (GE) has submitted to the Nuclear Regulatory Commission's (NRC) staff for its review a standardized final design for major portions of a nuclear power reactor of the type described in 10 CFR 50.22. The design is described in the General Electric Standard Safety Analysis Report, GESSAR II, including Amendments 1 through 16 thereto.
- (2) GESSAR II contains final design information in accordance with 10 CFR Part 50, Appendix O, Paragraph 3, for the nuclear island portion of a BWR-6/Mark III containment boiling water reactor nuclear power plant which encompasses the nuclear steam supply system (NSSS), engineered safety feature systems, reactor building (including the shield building and containment), auxiliary building, control building, radwaste building, fuel handling building, and related systems and structures. The GESSAR II reference design is for a facility which would operate at a core thermal power level of 3730 megawatts (1269 megawatts electrical, nominal net).
- (3) The GESSAR II reference design has been reviewed by the NRC staff and by the Advisory Committee on Reactor Safeguards (ACRS). The results of the NRC staff evaluation of the GESSAR II reference design are presented in the Safety Evaluation Report (SER), NUREG-0979, dated April 1983 and SER Supplement 1 dated July 1983. The ACRS' comments are set forth in its letter of June 15, 1983 (Appendix F of the SER Supplement 1).
- (4) Based on its review and the findings set forth in Section 21 of the SER, the NRC staff has concluded that subject to the conditions set forth herein, the information provided in GESSAR II with respect to the major portions of the final design encompassed by GESSAR II, as described in paragraph 2 above, complies with the requirements of 10 CFR Part 50, Appendix O and Paragraph B.3.b(1) of the Commission's "Policy Statement on Severe Reactor Accidents Regarding Future Design and Existing Plants" (50 FR 32138) and is acceptable for incorporation by reference in individual facility applications for construction permits and operating licenses. In accordance with 10 CFR Part 50, Appendix O, subject to the conditions set forth herein and in Appendix O, the approved design shall be utilized and relied upon by the staff and the ACRS in their reviews of any individual facility license application which incorporates by reference the approved design unless there exists significant new information which substantially affects the determination set forth in this Final Design Approval or other good cause.

- (5) The BWR/6 Nuclear Island design described in GESSAR II is acceptable for use as a reference design for construction permit and operating license applications which are to be located at sites whose characteristics conform to the envelope of site parameters postulated for the BWR/6 Nuclear Island design which are set forth in GESSAR II and NUREG-0979 provided that the balance-of-plant which interfaces with the approved design conforms to the safety-related interface requirements set forth in GESSAR II and NUREG-0979.
- (6) (a) The BWR/6 Nuclear Island design is acceptable for use as a reference design for construction permit and operating license applications except for those features of the design which are specified in Attachment A hereto. These design features must be satisfactorily resolved to conform to the NPC staff's requirements described in NUREG-0979. To the extent that the General Electric Company subsequently resolves these issues and modifies GESSAR II to conform to the staff requirements, the conditions shall be modified accordingly. If all the issues are resolved to conform to the staff requirements, these conditions in Attachment A will be deleted. All of the issues in Attachment A must be satisfactorily resolved prior to the NRC issuing a construction permit or an operating license for a facility referencing the GESSAR II design.
- (b) In addition to the conditions specified in Attachment A, there are certain issues identified in Section 1.9 of SER Supplement 1 which are confirmatory in nature. These are issues that have essentially been resolved to the staff's satisfaction although some additional information may be required of GE. It will be necessary for GE to submit the additional information in sufficient time to allow the staff to confirm its conclusions prior to issuing a construction permit or an operating license for a facility referencing the GESSAR II design.
- (c) The GESSAR II reference design is still under review by the NRC staff and the ACRS for the severe accident considerations described in the Commission's Severe Accident Policy Statement. This review must be completed and the criteria stated in Section B.2 of the Severe Accident Policy Statement must be satisfied prior to the NRC issuing a construction permit or an operating license for a facility referencing the GESSAR II design.
- (7) This Final Design Approval and all applications for construction permits and operating licenses incorporating it by reference, are subject to all applicable provisions of the Atomic Energy Act, as amended, and the rules and regulations and Orders of the Commission now or hereafter in effect.
- (8) This Final Design Approval does not constitute a commitment to issue a permit or license or in any way affect the authority of the Commission, Atomic Safety and Licensing Appeal Board, Atomic Safety and Licensing Boards and other presiding officers in any proceeding under Subpart G of 10 CFR Part 2.

- (9) This Final Design Approval as amended is effective as of its date of issuance. The staff shall further amend the Final Design Approval upon the completion of the severe accident review described in Paragraph 6(c) above to implement the results of that review.

FOR THE NUCLEAR REGULATORY COMMISSION

  
Hugh L. Thompson, Jr. Director  
Division of Licensing  
Office of Nuclear Reactor Regulation

Attachment:  
Attachment A - Conditions of FDA-1

Date of Issuance: August 9, 1985

ATTACHEMENT A

GESSAR-II BWR/6 NUCLEAR ISLAND DESIGN

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CONDITIONS OF FDA-1 WHICH INCORPORATE NUCLEAR REGULATORY COMMISSION STAFF  
POSITIONS THAT IDENTIFY REQUIPEMENTS DIFFERENT FROM THOSE NOTED IN GESSAR II

<u>Condition No.</u>	<u>Design Feature</u>	<u>SER Section Where Staff Positions are Discussed</u>
1.	Post Accident Monitoring Instrumentation	7.5.2
2.	Humphrey Issues	6.2

Dated: August 9, 1985