



General Electric Company
175 Curtner Avenue, San Jose, CA 95125

April 30, 1993

Docket No. STN 52-001

Chet Poslusny, Senior Project Manager
Standardization Project Directorate
Associate Directorate for Advanced Reactors
and License Renewal
Office of the Nuclear Reactor Regulation

Subject: Submittal Supporting Accelerated ABWR Review Schedule - DFSEER COL
Action Item 1.2.1-1 and Open items 1.2.2-1 and 1.2.2-2

Dear Chet:

Enclosed is a SSAR markup addressing DFSEER Action Item 1.2.1-1. Open Items 1.2.2-1 and 1.2.2-2 are addressed below.

Open Item 1.2.2-1

As previously advised in a letter dated March 8, 1993, GE will submit by July 31, 1993 a final verified SSAR, a non-proprietary Tier 1 design description; and a complementary integrated set of ITAAC. As prescribed by 10 CFR 52.45(d), this submittal will comply with the filing requirements of 10 CFR 50.30(b).

The SSAR verification process is currently underway and, when completed, will provide assurance that (1) the final SSAR properly reflects its design documentation, (2) the final SSAR is technically accurate and consistent within itself, and (3) the Tier 1 material and the final SSAR are consistent.

Through this action, then, GE fully conforms to the Staff guidance provided in the DFSEER pertaining to Open Item 1.2.2-1.

Open Item 1.2.2-2

In a meeting on March 30, 1992, GE presented the ABWR Common Engineering design control process including document approval/issuance, and design change control. In this meeting as well as in earlier meetings, GE also presented the Design Action List (DAL) process for tracking and controlling design changes to conform the ABWR to utility requirements and/or U.S. regulations, regulatory guidance, and Codes and Standards. Further, GE provided the Staff with a list of the ABWR Common Engineering design documents as well as the DALs that apply to the U.S. ABWR design. Prior to issuance of the FDA on the ABWR, GE will finalize the list and provide the corresponding effective dates of Common Engineering documents and DALs.

Sincerely,

Jack Fox
Advanced Reactor Programs

cc: Norman Fletcher (DOE)
Joe Quirk (GE)

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1.1 INTRODUCTION

1.1.1 Format and Content

The Advanced Boiling Water Reactor Standard Safety Analysis Report (ABWR SSAR), is written in accordance with Regulatory Guide 1.70. For consistency with NUREG-0800, the ABWR SSAR includes Section 15.8 which addresses anticipated transients without scram and Chapter 18 which addresses human factors. In addition, response to TMI related matters is presented in Appendix 1A.

The response to severe accident policy statement is provided in Chapter 19. Chapter 20 is included to provide a question and response guide.

1.1.2 ABWR Standard Plant Scope

The ABWR Standard Plant includes all buildings which are dedicated exclusively or primarily to housing systems and the equipment related to the nuclear system or controls access to this equipment and systems. There are five such buildings within the scope of the ABWR Standard Plant. These are:

- (1) Reactor building (including containment);
- (2) Service building;
- (3) Control building;
- (4) Turbine building; and
- (5) Radwaste building.

In addition to these buildings and their contents, the ABWR Standard Plant provides the supporting facilities shown in Figure 1.2-1.

1.1.3 Engineering Documentation

Engineering documentation for the ABWR Standard Plant is listed on Master Parts List (MPL) No. 18NS07A03*. This MPL is a controlled list, structured by system, that contains the identification of hardware and software documentation that defines the ABWR Standard Plant.

* GE Proprietary

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1.1.4 Type of License Required

This ABWR SSAR is submitted in support of the application for final design approval (FDA) and design certification (DC) for the ABWR Standard Plant.

1.1.5 Number of Plant Units

For the purpose of this document, only a single standard plant will be considered.

1.1.6 Description of Location

This plant can be constructed at any location which meets the parameters identified in Chapter 2.

1.1.7 Type of Nuclear Steam Supply

This plant will have a boiling water reactor nuclear steam supply system designed and supplied by GE and designated as ABWR.

1.1.8 Type of Containment

The ABWR will have a low-leakage containment vessel which comprises the drywell and pressure suppression chamber. The containment vessel is a cylindrical steel lined reinforced concrete structure integrated with the reactor building. The containment nomenclature is specified in Figure 1.1-1.

1.1.9 Core Thermal Power Levels

The information presented in this ABWR SSAR pertains to one reactor unit with a rated power level of 3926 MWt and a design power level of 4005MWt. The station utilizes a single-cycle, forced-circulation, boiling water reactor (BWR). The heat balance for rated power is shown in Figure 1.1-2. The station is designed to operate at a gross electrical power output of approximately 1356 MWe and net electrical power output of approximately 1300 MWe.

→ INSERT B

INSERT A

1.1.4 Design Process

GE and its associates control the review and approval of ABWR Common Engineering design documents with a procedure using the Engineering Review Memorandum (ERM). Evidence of design verification is entered into the design records of the responsible design organization. Engineering documents prepared uniquely by GE for the U.S. ABWR, changes to engineering documents are entered into the GE design record files. A COL applicant will establish the design, including the supporting detailed design documentation, consistent with the design control document referenced in the certified design rule. See Subsection 1.1.11.1 for COL license information requirements.

INSERT B

1.1.11 COL License Information

1.1.11.1 Design Process to Establish Detailed Design Documentation

The COL applicant will provide the design process required to establish the detailed design documentation. (See Subsection 1.1.4)