



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

April 28, 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 - **DFSER Open**
Item 1.2.6-1

Dear Chet:

Enclosed is a SSAR markup addressing DFSER Open Item 1.2.6-1.

Please provide a copy of this transmittal to Jerry Wilson.

Sincerely,

Jack Fox
Advanced Reactor Programs

cc: Norman Fletcher (DOE)
Bernie Genetti (GE))

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ABWR Standard Plant

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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.

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INSERT 1.1.2

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

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 1.1.2

The ABWR evolutionary design provides an essentially complete nuclear power plant except for site-specific elements. The site-specific elements are included as representative conceptual designs with interface requirements sufficient for the final safety analysis and design-specific probabilistic risk assessment in accordance with 10 CFR ~~52.47~~ 52.47(a)(1)(vii) and (b)(1). These are:

- (1) Ultimate heat sink
- (2) Offsite power (transmission)
- (3) Make up water (preparation)
- (4) Potable and sanitary water
- (5) Reactor service water
- (6) Turbine service water
- (7) Lighting and servicing power supply
- (8) Communications
- (9) Site security

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NO.	FACILITY
1	REACTOR CONTAINMENT
2	REACTOR BUILDING
4	MAIN STEAM/FEEDWATER TUNNEL
5	TURBINE BUILDING
6	SERVICE BUILDING
7	RADWASTE BUILDING
8	HOUSE BOILER
9	CONDENSATE STORAGE TANK
10	MAIN TRANSFORMER BUNKER FUEL TANK
11	NORMAL SWITCHGEAR
12	DIESEL OIL STORAGE TANK (3)
13	STACK
14	EQUIPMENT ENTRY LOCK
15	FIRE PROTECTION WATER STORAGE TANK (2)
16	FIRE PROTECTION PUMPHOUSE

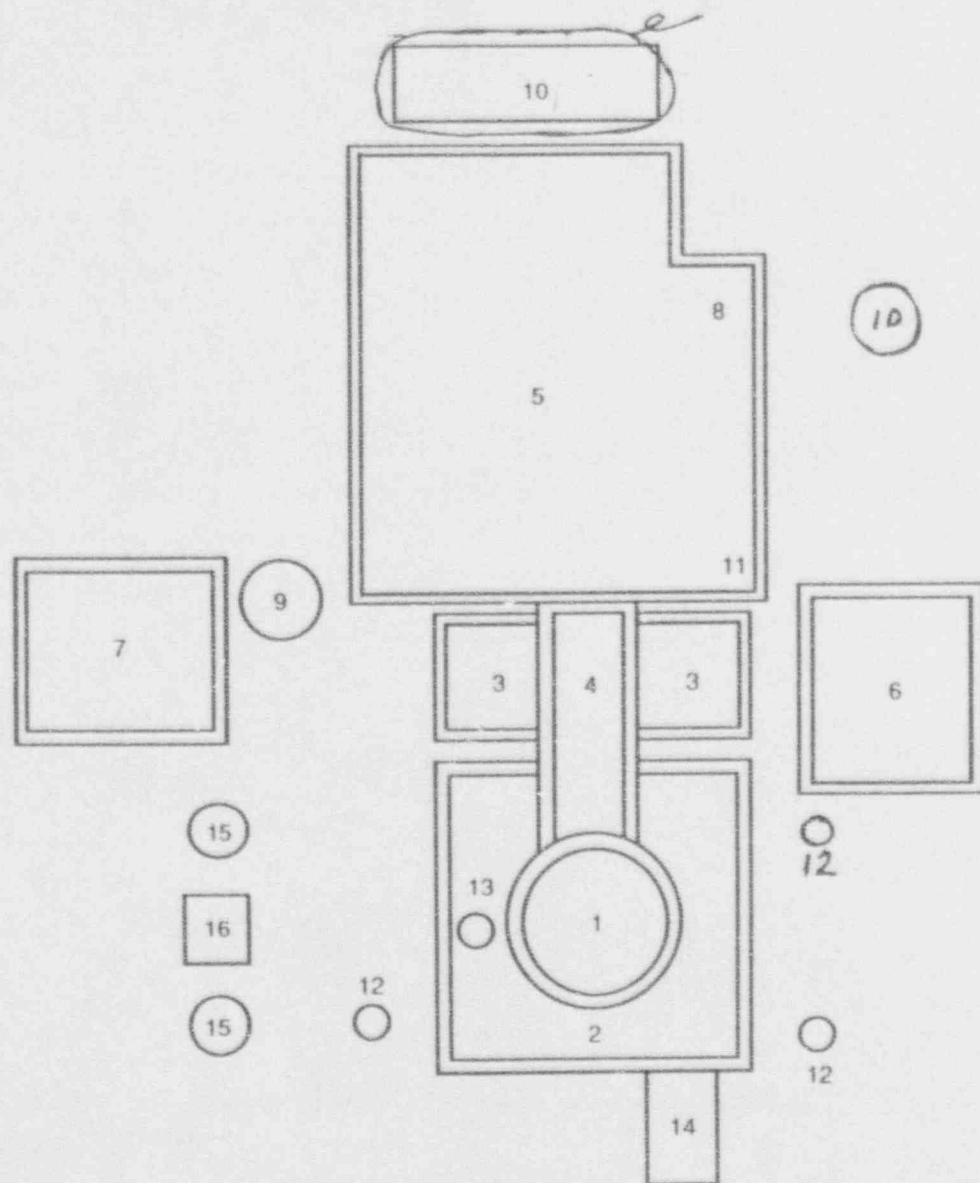


FIGURE 1.2-1 SITE PLAN