



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555-0001

January 4, 1994

Docket No. 52-004

Mr. Patrick W. Marriott, Manager
Licensing & Consulting Services
GE Nuclear Energy
175 Curtner Avenue
San Jose, California 95125

Dear Mr. Marriott:

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION (RAI) REGARDING THE SIMPLIFIED
BOILING WATER REACTOR (SBWR) DESIGN

The staff has determined that it needs additional information to support its review activities related to the SBWR design certification. Some additional information on the radiation protection information contained in Chapters 9 and 12 of the SBWR standard safety analysis report (SSAR), as well as the plant radiation zone layout drawings (Figures 21.12.3-1 through 4), is needed (Q471.22-Q471.38). In order to meet the SBWR RAI response date in SECY-93-097, "Integrated Review Schedules for the Evolutionary and Advanced Light Water Reactor Projects," dated April 14, 1993, please provide a written response to the enclosed questions by January 31, 1994.

You have previously requested that portions of the information submitted in the August 1992, application for design certification of the SBWR plant, as supplemented in February 1993, be exempt from mandatory public disclosure. The staff has not completed its review of your request in accordance with the requirements of 10 CFR 2.790; therefore, that portion of the submitted information is being withheld from public disclosure pending the staff's final determination. The staff concludes that this RAI does not contain those portions of the information for which you are seeking exemption. However, the staff will withhold this letter from public disclosure for 30 calendar days from the date of this letter to allow GE the opportunity to verify the staff's conclusions. If, after that time, you do not request that all or portions of the information in the enclosure be withheld from public disclosure in accordance with 10 CFR 2.790, this letter will be placed in the NRC's Public Document Room.

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*The numbers in parentheses designate the tracking numbers assigned to the questions.

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This RAI affects nine or fewer respondents, and therefore, is not subject to review by the Office of Management and Budget under P.L. 96-511.

In the near future, the staff would like to arrange a conference call or a meeting to discuss additional questions it has concerning the plant radiation zone layout drawings. Please contact me at (301) 504-1178 or Mr. Son Ninh at (301) 504-1125 to make arrangements and if you have any other questions regarding this matter.

Sincerely,

(Original signed by)

Melinda Malloy, Project Manager
Standardization Project Directorate
Associate Directorate for Advanced Reactors
and License Renewal
Office of Nuclear Reactor Regulation

Enclosure:
RAI on the SBWR Design

cc w/enclosure:
See next page

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Done as marked!

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DATE	01/4/94	01/4/94	01/4/94	01/4/94

Mr. Patrick W. Marriott
GE Nuclear Energy

Docket No. 52-004

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REQUEST FOR ADDITIONAL INFORMATION (RAI) ON THE
SIMPLIFIED BOILING WATER REACTOR (SBWR) DESIGN

Radiation Protection

- 471.32 SSAR Section 9.1.4.2.4 states that one of the functions of the fuel prep machine will be to remotely reconstitute defective fuel in the spent fuel pool. During fuel reconstitution, there is a possibility that irradiated fuel particles may be released from the fuel and spread to other portions of the spent fuel pool. Describe any design features and/or any operational practices that will be used during fuel reconstitution to prevent the potential release of any irradiated fuel particles to other portions of the spent fuel pool.
- 471.33 SSAR Section 12.1.2.3 describes facility layout general design considerations for maintaining radiation exposures as-low-as-is-reasonably-achievable (ALARA). This section should be amended to describe the availability of staging areas in containment to facilitate the installation and operation of equipment to perform full or partial decontamination of the reactor coolant system.
- 471.34 Some operating plants have experienced airborne cross contamination between different parts of the plant. This is due to the flow of radioactively contaminated air through the liquid drain system from a contaminated area/floor to a clean area/floor. Describe how the design of the SBWR floor drain system will preclude the flow of contaminated air from one area/floor to another. (One possible design fix that would prevent such cross contamination is the use of water-filled loop seals in the floor drain system.)
- 471.35 SSAR Section 12.3.4 describes the SBWR area radiation and airborne radioactivity monitoring instrumentation. Amend this section to include a description of the criteria used for placement and location of the SBWR area radiation and airborne radioactivity monitors.
- 471.36 The following questions refer to the area radiation monitors listed in SSAR Table 12.3-2 and depicted on SSAR Figure 21.12.3-1 (Sheets 1 through 13):
- The bracketed numbers which appear near the monitor locations in the layout figures do not always correspond to the numbers listed for the monitors in SSAR Table 12.3-2. Correct this apparent discrepancy.
 - Five of the area radiation monitors listed in SSAR Table 12.3-2 (monitor numbers 1, 2, 3, 7, and 9) do not appear on the designated plant layout figures. These monitor locations should be added to the appropriate plant layout figures.

Enclosure

- 471.37 There is an apparent error in the dose rate "legend" on SSAR Figure 21.12.3-2 (Sheets 1 through 13). The dose rate range for Zone V should read ">5 Sv/hr (500 Rem/hr)" instead of ">50 Sv/hr (5000 Rem/hr)."
- 471.38 Make the following editorial change in SSAR Section 12.2.3.3: correct the spelling of the word "concentration" in the second line of the section entitled, "Radioactive Sources in the Spent Fuel Pool."