

October 17, 1984

Docket No. STN 50-601

Mr. E. P. Rahe, Jr.
Manager
Nuclear Safety Department
Water Reactor Division
Westinghouse Electric Corporation
Pittsburgh, Pennsylvania 15230

Dear Mr. Rahe:

Subject: RESAR-SP/90 Preliminary Design Approval (PDA) Application Module 5,
"Reactor System," Request For Additional Information

We are continuing our review of the RESAR-SP/90 PDA Module 5 and have identified the need for additional information. Due to the modular format for submittal of RESAR-SP/90, we have only reviewed the information actually contained in Module 5; additional plant detail will be needed during our review of the individual modules.

You are requested to provide your response to the questions identified in the enclosure within 30 days of the date of this letter to enable us to complete the review of Module 5.

Sincerely,

Original signed by
Herbert N. Berkow for
Cecil O. Thomas, Chief
Standardization and Special
Projects Branch
Division of Licensing

Enclosure:
As stated

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

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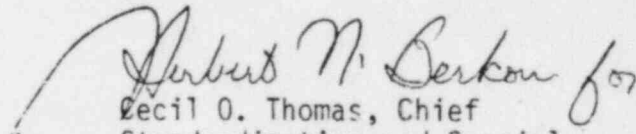
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REQUEST FOR ADDITIONAL INFORMATION WESTINGHOUSE RESAR-SP/90

- 490.1 The WAPWR fuel design has a new feature for those rods containing integral fuel burnable absorber. Will the absorbing material melt during any operational transients before the fuel melting limit is exceeded?
4.2
- 490.2 What is the limit and method used for creep collapse analysis for WAPWR fuel rods? Since this is a new design, please provide pertinent information on the fuel densification limit and the initial fuel pressure of the fuel rods to assure no creep collapse occurs.
4.2
- 490.3 Provide analyses of combined seismic-and-LOCA loads on WAPWR fuel assemblies to demonstrate the conformance to Appendix A of SRP 4.2.
4.2
- 490.4 Describe plans for on-line fuel system monitoring and post-irradiation surveillance.
4.2
- 491.1 Past agreements with Westinghouse, going back as far as Robinson and Indian Point 2 reviews, relating to X-Y plane xenon stability, have been that specific tests would be performed to demonstrate stability for reactor classes with significant, relevant new characteristics such as core diameter or power density. This is the primary bases on which assurances of stability have been accepted. Please indicate if such tests will be carried out for WAPWR.
4.3
- 491.2 Discuss the effects of low radial leakage core-reflector design on excore detection, particularly the SRM and axial distribution measurements with the four segment power monitors. Also, we have not as yet seen an uncertainty analysis Topical Report for the four segment excore system. Is this report to be submitted? Will it address low leakage configuration?
4.3

491.3 There have recently been some problems with current
15.4.1 Westinghouse reactors about Technical Specifications and the
 control rod withdrawal at zero power event in modes 3, 4, or 5
 because of differences between Technical Specification allowed
 equipment operability and the analysis which assumes two pumps
 in operation. How will this problem be handled in WAPWR?

492.1 You state on page 4.4-8 of WAPWR-RS "It was concluded from
4.4 preliminary evaluation of the data that the CHF characteristics
 of WAPWR fuel assembly design are not significantly different
 from those of the current 17x17 design, and can be described
 by the WRB-2 CHF correlation."

Provide the data from your CHF tests which model the WAPWR
fuel assembly and give your analytic justification for the use
of the 1.17 design criterion.

492.2 Provide the documentation required by NUREG-0737 Item II.F.2.
4.4 The response should be given item-by-item showing how your design
 complies with each requirement. Clearly state where your design
 deviates from the requirements and why such deviation is accept-
 able.