



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

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MAY 3 1983

Project No. 668

Mr. E. P. Rahe, Jr., Manager  
Nuclear Safety Department  
Westinghouse Electric Corporation  
Post Office Box 355  
Pittsburgh, Pennsylvania 15230

Dear Mr. Rahe:

On April 20, 1983, members of my staff met with D. Call and D. Bevard of Westinghouse to discuss our concerns about your proposed modular SAR format for the Westinghouse Advanced PWR (WAPWR) project. We had requested this meeting in response to your letter dated January 31, 1983, in which you stated that the modular approach would meet all regulatory requirements and would provide early review attention to important areas of design, while not causing any duplication of the review effort. A meeting was necessary because these conclusions were not evident to us based on the information Westinghouse had provided.

In the discussions at the April 20, 1983 meeting we divided the WAPWR project into three distinct phases of review: (1) pretending; (2) PDA; and (3) FDA. The pretending phase, which is now underway, is proceeding in accordance with our previous commitments and, as such, was not the subject of our concerns. With regards to the FDA phase, D. Call stated that Westinghouse now plans to submit an application for an FDA in mid-1985. This application would be in the form of a single, complete package, not the modular submittals as previously proposed. With this understanding, our immediate concerns and, therefore, the discussions at the April 20, 1983 meeting were focused primarily on the PDA phase.

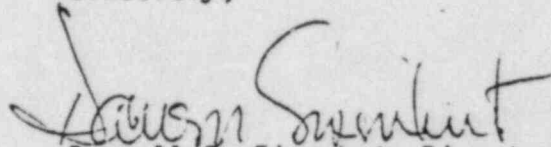
Previously, you had planned to initiate the PDA phase by submitting a formal application in March 1983. D. Call stated that for a variety of reasons this has now been slipped to June 1983, but that it was still your intention to submit your design information in modular format over a period of several months. ~~Initial preliminary feedback from our reviewers in the pretending phase indicated that review of the pretending modules was difficult because of missing information, particularly a clear identification of interfaces between modules. We were assured that these problems would be corrected in the modules when submitted in final form as part of the PDA application.~~ In order to demonstrate how this would be accomplished, it was agreed that a test program would be conducted as follows:

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- 1) Westinghouse would finalize one module (Primary Side Safeguards was suggested) and submit it to the NRC in advance of the PDA application.
- 2) Westinghouse would meet with the NRC reviewers in a working session to describe the format and content of the trial module in order to respond to any initial questions from the staff. (We are to be informed within the next week as to when Westinghouse would be prepared for this meeting.)
- 3) The NRC would complete a draft SER for the trial module within one month after receipt.
- 4) Westinghouse would meet with the staff to discuss the draft SER. These discussions would examine the technical adequacy of the material submitted and the suitability of the module format for its intended purpose.
- 5) Westinghouse would incorporate the "lessons learned" from this trial program into the initial PDA submittal.

I am confident that the program outlined above will prove to be beneficial and should greatly facilitate the PDA review phase. If you have any questions about this matter, please contact us at your earliest convenience.

Sincerely,



Darrell G. Eisenhut, Director  
Division of Licensing  
Office of Nuclear Reactor Regulation

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

AUG 12 1983

Project No. 658

Mr. E. P. Rahe, Jr., Manager  
 Nuclear Safety Department  
 Westinghouse Electric Corporation  
 Post Office Box 355  
 Pittsburgh, Pennsylvania 15230

Dear Mr. Rahe:

During the past few months, we have discussed with Westinghouse the format and content of a Preliminary Design Approval (PDA) application for the Westinghouse Advanced Pressurized Water Reactor (WAPWR). Westinghouse is proposing to submit the WAPWR PDA design information in separate modules over a period of several months. In my letter of May 3, 1983, I outlined a trial program we would use to test the feasibility of Westinghouse's proposal. On June 13, 1983, Westinghouse submitted to the NRC a preliminary Primary Side Safeguards System (PSSS) module to be reviewed as part of the trial program. We have completed our review of this module and a detailed report is being prepared. The purpose of this letter is to provide some initial feedback so that Westinghouse can proceed with it's planning and preparations for the WAPWR PDA application.

Our specific comments are enumerated below. In general, we have concluded that it is feasible for us to review a PDA application with design information submitted in a modular format. We would prefer the single, PSAR-type submittal, but we recognize that there are some advantages to your proposal. As a result, we will initiate a formal review of your WAPWR design immediately upon receipt of your PDA application. Your application should consider the comments identified below, as well as those in our detailed report, to follow, on our review of the WAPWR preliminary Primary Side Safeguards System module.

The following are some our major comments resulting from the "trial" program:

1. Our review of a module and our report thereon will be limited to the primary subject matter of the module, i.e., things such as supporting systems are too fragmented to efficiently review.
2. The general format of the module is good. The use of the Regulatory Guide 1.70 numbering and titles will greatly facilitate our review.

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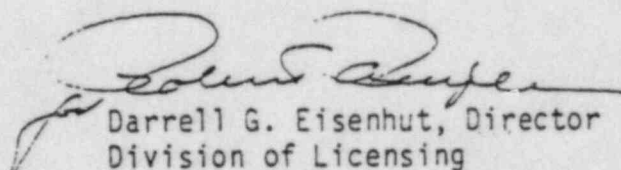
3. The categorization of the sections given in the Table of Contents is very useful. In general, we will review only Category I sections. Category I sections must be complete when submitted and should not include promises to provide necessary information "later."
4. The information in Category II sections usually applies to more than one module. If this information provides some clarity to the primary subject matter, it should be included; however, we generally view each section as an individual subject in itself. Therefore, our review of a Category II type of section will be delayed until the material is completed in subsequent modules.
5. Your initial application should contain a comprehensive schedule for our review and approval, showing when you will submit information for each section of the PSAR. This schedule should show how the affected sections will progress from Categories II and III to Category I.
6. Generic material should be extracted from the systems modules and submitted in a separate module. For example, your seismic information in the PSSS module has broad applicability and is nonspecific with regards to the Integrated Safeguards System. Information of this type, which can be submitted in identical form in several modules, is not useful in the review of the primary subject matter.
7. We will attempt to complete a review of each module within 3-4 months of receipt. However, this time frame may not be sufficient to resolve all of our questions. Hence, our reports on our review of each module may identify some outstanding questions which W should respond to in the final PSAR submittal. In addition, we will be able to meet the 3-4 month review schedule only if Westinghouse adheres strictly to the approved submittal schedule described in item 5, above.

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8. Bookkeeping will be difficult. Changes to previously submitted modules should be minimized (i.e., information should be final and complete when initially submitted). All changes should be clearly controlled and identified.
9. The final SER should take about 4 months to prepare after the PSAR is complete. This is longer than Westinghouse proposed, but because of the limitations on our individual module reviews, we believe it will take the 4 months to integrate the various pieces. The 4 month schedule also assumes that Westinghouse's final PSAR submittal is fully responsive to the staff's concerns identified during the individual module reviews. If additional rounds of questions are required, the schedule would undoubtedly have to be extended.
10. The pretending modules and discussions are very beneficial and will be useful during the PDA review.

I hope that these comments have provided sufficient information to allow Westinghouse to proceed with the preparation of your PDA application. We will forward the additional detailed comments in the near future. Gary Meyer, our WAPWR project manager, will be prepared to discuss these comments and answer any related questions at a meeting with your staff in Pittsburgh on August 9, 1983.

Sincerely,

  
Darrell G. Eisenhut, Director  
Division of Licensing



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

NOV 07 1983

Docket No. STN 50-601

MEMORANDUM FOR: Roger J. Mattson, Director  
Division of Systems Integration

Richard H. Vollmer, Director  
Division of Engineering

Themis P. Speis, Director  
Division of Safety Technology

Hugh L. Thompson, Director  
Division of Human Factors Safety

FROM: Darrell G. Eisenhut, Director  
Division of Licensing

SUBJECT: RESAR SP/90 ACCEPTANCE REVIEW

By letter dated October 24, 1983, Westinghouse tendered an application for Preliminary Design Approval (PDA) of the Westinghouse RESAR SP/90 design in accordance with 10 CFR 50, Appendix O. Enclosure 1 is a copy of Westinghouse's forwarding letter. The entire application has been distributed to the appropriate review branches.

You should note that the application, at this time, contains design information only for the "Primary Side Safeguards System." This modular approach was reviewed and found to be acceptable for the PDA stage only (see Enclosure 2). Because of this modular approach, two other parts of Westinghouse's application assume added importance: 1) the schedule for future module submittals, and 2) a cross-reference between SRF sections and modules. From this information each of your review branches should be able to ascertain when the information under their cognizance would be available. This schedule has received no prior review by the NRC.

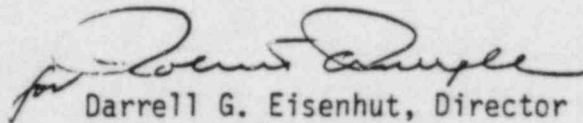
You are requested to have each of your review branches conduct an acceptance review of Westinghouse's application and provide written comments by C.O.B. Tuesday, November 22, 1983. Any significant deficiencies found should be reported, as soon as possible, directly to Gary Meyer, SSPB (x29787), in order to avoid any unnecessary delays in docketing.

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The acceptance review, for most branches, would consist of verifying the completeness and acceptability of the schedule for submittals. It is our intent to prepare a draft SER on each module within three months after receipt. Therefore, it is important to ensure that the SRP sections are sequenced satisfactorily, such that if supporting information is required to complete a module review, it would be contained in the subject module or in a previously submitted module. For those branches, such as Reactor Systems Branch, which have technical review responsibility for the material in Module 1, the acceptance review should also include a review of the completeness of the Module 1 material.

If you have any questions on this matter, please contact Cecil Thomas (x27130) or Gary Meyer (29787) at your earliest opportunity.

  
Darrell G. Eisenhut, Director  
Division of Licensing

Enclosures:  
As stated

cc: NRR ADs  
NRR BCs  
WAPWR Reviewers



Westinghouse  
Electric Corporation

Water Reactor  
Divisions

Nuclear Technology Division

Box 355  
Pittsburgh Pennsylvania 15230

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NS-EPR-2842

October 24, 1983

Docket No. STN50-601

Mr. Harold R. Denton, Director  
Office of Nuclear Reactor Regulation  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

SUBJECT: Westinghouse Advanced Pressurized Water Reactor Reference Safety Analysis Report (RESAR) - SP/90 - Application for Preliminary Design Approval and Submittal of Module 1, "Primary Side Safeguards System"

- REF:
1. Westinghouse Letter (NS-EPR-2778), dated June 13, 1983, E. P. Rahe, Jr. to D. G. Eisenhut
  2. Westinghouse Letter (NS-EPR-2712), dated January 31, 1983, E. P. Rahe, Jr. to D. G. Eisenhut
  3. NRC Letter dated August 12, 1983, D. G. Eisenhut to E. P. Rahe, Jr.

Dear Mr. Denton:

Enclosed are:

1. Fifteen (15) copies of a Westinghouse document entitled, "Westinghouse Advanced Pressurized Water Reactor RESAR SP/90 - Module 1: Primary Side Safeguards System" (Proprietary).
2. Fifteen (15) copies of the WAPWR Nuclear Power Block scope definition (Non-Proprietary).
3. Fifteen (15) copies of a schedule for future module submittals (Non-Proprietary).
4. Fifteen (15) copies of a listing of the complete Table of Contents for the integrated PDA document, including identification of which module(s) each subsection shall appear in the interim modular review phase (Non-Proprietary).
5. One (1) copy of an Application for Withholding Proprietary Information From Public Disclosure (Non-Proprietary).
6. One (1) copy of an original Affidavit (Non-Proprietary).

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Mr. H. R. Denton  
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This application for Preliminary Design Approval of the Westinghouse Advanced Pressurized Water Reactor RESAR SP/90 design is being tendered for completeness review per 10CFR50, Appendix O and 10CFR2.101. This application is accompanied by the application fee of \$50,000.00 in accordance with 10CFR170.12 and 10CFR170.21. The requisite additional copies of Module 1 are available and will be submitted to the Staff upon conclusion of the completeness review and issuance of a docket number, per 10CFR50.30.

Westinghouse is developing this Advanced Pressurized Water Reactor design for domestic as well as international application in the late 1980's timeframe. This total plant design is being developed through a major cooperative effort with a Japanese vendor and a consortium of Japanese utilities, and is directed toward the establishment of final design detail and completion of an extensive test program by the end of 1985.

The WAPWR design is a standardized four loop, single unit total plant (i.e., nuclear power block) design for a pressurized water reactor. The scope of the WAPWR nuclear power block design includes the nuclear steam supply system and other structures, systems, and components important to the safe and proper operation of the plant sufficient for a self-standing application for total plant design certification. See Enclosure 2 for a detailed listing of plant areas, with the scope responsibility delineated between the WAPWR nuclear power block and the balance of plant.

The WAPWR design includes a nuclear steam supply system with a thermal rating of 3816 megawatts which includes a core thermal power of 3800 megawatts plus 16 megawatts from reactor coolant pump heat. The core thermal power level of 3800 megawatts is the intended licensed power level for the WAPWR nuclear power block design. However, major components of the WAPWR design have been sized for a stretch core thermal rating of 4200 megawatts.

With regard to domestic licensing of this design, Westinghouse intends to apply for final self-standing one-step design certification based upon Final Design Approval with rulemaking completed in 1987. As an interim step this Preliminary Design Approval is targeted for 1985. In the interest of increased licensing review efficiency, Westinghouse has proposed (References 1 and 2), and the NRC has accepted (Reference 3), a modular approach for development of this PDA-level Safety Analysis Report.

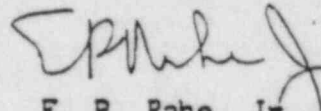
As requested by the Staff in Reference 3, Enclosure 3 provides a schedule for future module submittals and Enclosure 4 provides a comprehensive outline, consistent with the format of Regulatory Guide 1.70, Revision 3, of the integrated PDA document as well as identification of the anticipated content of each contributing module. It is anticipated that the completeness review will be limited to Enclosures 3 and 4 since the acceptable level of module technical detail was established during the feasibility stage of the PDA modular approach.

Mr. H. R. Denton  
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The enclosed material is submitted for your information and is to be treated as proprietary information of Westinghouse Electric Corporation. The information will be separately resubmitted in whole in conformance with the requirements of 10CFR2.790 should it be employed as part of a license application or other action identified in 10CFR2.790(a).

Correspondence with respect to the affidavit or application for withholding should reference AW-83-93, and should be addressed to R. A. Wiesemann, Manager of Regulatory and Legislative Affairs, Westinghouse Electric Corporation, P.O. Box 355, Pittsburgh, Pennsylvania 15230.

Very truly yours,



E. P. Rahe, Jr., Manager  
Nuclear Safety Department

MDB/kk  
Enclosures

cc: D. Eisenhut (NRC)  
R. Mattson (NRC)  
F. R. Miraglia, Jr. (NRC)  
C. O. Thomas (NRC)  
G. C. Meyer (NRC)