



Westinghouse
Electric Corporation

Water Reactor
Divisions

Nuclear Technology Division

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NS-EPR-2670

October 18, 1982

Dr. Cecil O. Thomas, Chief
Special Projects Branch
Division of Project Management
U.S. Nuclear Regulatory Commission
Phillips Building
7920 Norfolk Avenue
Bethesda, Maryland 20014

SUBJECT: "Westinghouse Wet Annular Burnable Absorber Evaluation Report",
WCAP-10021, Revision 1 (Proprietary)

- REFERENCES:
1. Letter (NS-TMA-2322) from Westinghouse (T. M. Anderson) to USNRC (J. R. Miller), October 24, 1980, Subject: Properties of Fuel and Core Component Materials, WCAP-9179, Revision 1 (Proprietary) and WCAP-9224 (Non-Proprietary).
 2. Letter from USNRC (C. Thomas) to Westinghouse (E. Rahe), September 29, 1982, Subject: Acceptance for Referencing of Licensing Topical Report WCAP-9179/WCAP-9224
 3. Letter (NS-EPR-2662) from Westinghouse (E. P. Rahe, Jr.) to USNRC (C. Berlinger), September 24, 1982, Subject: Westinghouse Wet Annular Burnable Absorber (WABA).

Dear Dr. Thomas:

Enclosed are:

1. Twenty-five (25) copies of Westinghouse topical report, "Westinghouse Wet Annular Burnable Absorber Evaluation Report", October 1982, WCAP-10021, Revision 1 (Proprietary).

Also enclosed are:

1. One (1) copy of Application for Withholding (Non-Proprietary).
2. One (1) copy of original Affidavit (Non-Proprietary).

The enclosed topical report is submitted for NRC review and approval. The report describes the new Westinghouse Wet Annular Burnable Absorber (WABA) design and summarizes an evaluation of its performance.

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The NRC was first informed of Westinghouse plans to utilize Al₂O₃-B₄C absorber pellets in the WABA design in 1979. Subsequently, the NRC was informed of plans to use WABA demonstration rods in Indian Point Unit 3, and in 1980 an Al₂O₃-B₄C Appendix B to the Westinghouse materials topical report (reference 1) was submitted. Recently this topical report and its appendices received NRC approval (reference 2). On August 16, 1982 a technical presentation of the WABA design, near term plant commitments and proposed licensing actions were presented to members of the NRC Core Performance Branch (reference 3).

A number of plants are scheduled to use the WABA rods in 1983, including D. C. Cook Unit 1, Cycle 8. As indicated in the August 16, 1982 meeting, generic approval for WABA usage is required well in advance of the Cycle 8 return to power. The D. C. Cook Unit 1 licensee has been advised of this generic approval request by Westinghouse and is planning to use this report and its approval to support WABA usage for Cycle 8 operation. Current projections are that approval is needed by February 1983.

As stated in our technical presentation to the NRC on August 16, 1982, it is our technical judgment that a special surveillance beyond the normal surveillance is not necessary. This is based on the extensive reactor operating experience with materials used in the WABA design and the Indian Point Unit 3 WABA demonstration rod results. However, we were requested to consider a special surveillance program for one or two lead plants using the WABA design. If the NRC considers a special surveillance program necessary, we propose a visual examination of a representative sample of the WABA rods discharged after a cycle of irradiation in one of the lead plants. This non-destructive post irradiation examination would provide additional confirmatory evidence on the mechanical integrity of the WABA rods; further examination would be performed only if anomalies are observed.

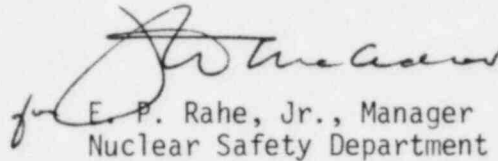
Note that at this time only the proprietary version of this topical report, appropriately bracketed to identify proprietary information, has been provided. This is consistent with the guidelines given in NUREG-0390, Vol. 6, No. 1, "Topical Report Review Status". Westinghouse will submit a corresponding non-proprietary version upon receipt of an NRC acceptance letter and SER, and/or when the licensing topical report is referenced in a specific license application in accordance with NUREG-0390. Also note that the notation of Revision 1 merely indicates that this is a revision of an internal Westinghouse report of the same WCAP number.

This submittal contains proprietary information of Westinghouse Electric Corporation. In conformance with the requirements of 10CFR2.790, as amended, of the Commission's regulations, we are enclosing with this submittal an application for withholding from public disclosure and an affidavit. The affidavit sets forth the basis on which the information may be withheld from public disclosure by the Commission.

Dr. C. O. Thomas
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Correspondence with respect to the affidavit or application for withholding should reference AW-82-61 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,


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

MDB/kk
Enclosures