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Westinghouse
Electric Corporation

Water Reactor
Divisions

Nuclear Technology Division

Box 355
Pittsburgh Pennsylvania 15230

NS-TMA-2307

September 16, 1980

Mr. James R. Miller, Chief
Special Projects Branch
Division of Project Management
U.S. Nuclear Regulatory Commission
Phillips Building
7920 Norfolk Avenue
Bethesda, Maryland 20014

Dear Mr. Miller:

Enclosed are:

1. Forty (40) copies of WCAP-9739 (Proprietary).
2. Twenty (20) copies of WCAP-9740 (Non-Proprietary).

Both reports are entitled "Summary of the Westinghouse Integrated Protection System Verification and Validation Program."

Also enclosed are:

1. One (1) copy of Application for Withholding AW-80-55 (Non-Proprietary).
2. One (1) copy of Affidavit (Non-Proprietary).

The enclosed report provides a summary of the test results obtained to date from the verification and validation program performed on the Westinghouse Integrated Protection System (IPS). Westinghouse presented the design bases for the IPS to the Nuclear Regulatory Commission in RESAR-414, and received a Preliminary Design Approval (PDA) in November of 1978. As a condition of the PDA, the Staff required that Westinghouse prove the design of the IPS by submitting the design to a verification and validation program. The verification and validation program, which was originally proposed in WCAP 9153, "414 Integrated Protection System Prototype Verification Program," dated August, 1977, consisted of a series of inspections and tests to be performed first on the individual hardware and software modules, and subsequently on the subsystems. Finally system level tests were to be performed on the entire IPS prototype, to verify the correctness of its design.

The NRC proposed an audit process as a means to review the IPS instead of the normal review process because of the magnitude and complexity of the system. Westinghouse was required to perform a complete formal design verification of the IPS while the NRC conducted audits of the results of the design

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verification. The NRC contracted the Oak Ridge National Laboratories to conduct the audits and to transmit the results of each audit to keep the Staff abreast of the verification program. Eight such audits were conducted from January, 1979 to September, 1980. Copies of the ORNL reports for the first seven audits are contained in the Appendix of this report.

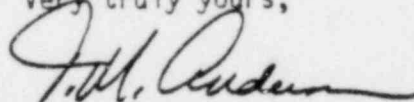
The results of this trial audit review process were favorable. From the standpoint of the NRC, a selective in-depth review of the IPS was obtained with only minimum effort. From the viewpoint of the vendor, the audit process avoids potential delays resulting from a lengthy Staff review. Westinghouse hopes to see continued use of this review technique in the future.

This submittal contains proprietary information. In conformance with the requirement of 10CFR Section 2.790, 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 identifies the information sought to be withheld and sets forth the basis on which the information may be withheld from public disclosure by the Commission.

We expect that the non-proprietary version of this report, WCAP-9740, will be placed in the Public Document Room and identified as a Westinghouse topical report.

Correspondence with respect to the Westinghouse affidavit or application for withholding should reference AW-80-55 and be addressed to: R. A. Wiesemann, Manager, Regulatory & Legislative Affairs, Westinghouse Electric Corporation, P.O. Box 355, Pittsburgh, PA 15230.

Very truly yours,



T. M. Anderson, Manager
Nuclear Safety Department

DVG/keg
Enclosure(s)



Westinghouse
Electric Corporation

Water Reactor
Divisions

Box 355
Pittsburgh Pennsylvania 15230

AW-80-55

September 16, 1980

Mr. James R. Miller, Chief
Special Projects Branch
Division of Project Management
U.S. Nuclear Regulatory Commission
Phillips Building
7920 Norfolk Avenue
Bethesda, Maryland 20014

APPLICATION FOR WITHHOLDING
PROPRIETARY INFORMATION FROM PUBLIC DISCLOSURE

SUBJECT: Summary of the Westinghouse Integrated Protection System
Verification and Validation Program (WCAP 9739)

REFERENCE: Westinghouse Letter No. NS-TMA-2307, Anderson to Miller,
dated September 16, 1980.

Dear Mr. Miller:

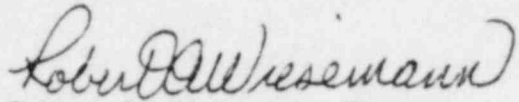
This application for withholding is submitted by Westinghouse Electric Corporation pursuant to the provisions of paragraph (b)(1) of 10CFR 2.790 of the Commission's regulations. It applies to the proprietary material transmitted by the referenced letter which supplements proprietary material previously submitted concerning the Westinghouse Integrated Protection System Verification and Validation Program.

The affidavit provided to justify withholding the previously submitted material, AW-76-23, a copy of which is attached, is equally applicable to this material. The referenced affidavit was submitted by Westinghouse letter No. NS-CE-1543, Eicheldinger to Ippolito, dated June 22, 1976.

Accordingly, it is requested that the subject Westinghouse proprietary material be withheld from public disclosure in accordance with the provisions of 10CFR 2.790 of the Commission's regulations.

Correspondence with respect to the proprietary aspects of this application for withholding or the accompanying affidavit should reference AW-80-55 and should be addressed to the undersigned.

Very truly yours,



Robert A. Wiesemann, Manager
Regulatory & Legislative Affairs

/keg
Attachment(s)

cc: E. C. Shomaker, Esq.
Office of the Executive Legal Director, NRC

AFFIDAVIT

COMMONWEALTH OF PENNSYLVANIA:

SS

COUNTY OF ALLEGHENY:

Before me, the undersigned authority, personally appeared Robert A. Wiesemann, who, being by me duly sworn according to law, deposes and says that he is authorized to execute this Affidavit on behalf of Westinghouse Electric Corporation ("Westinghouse") and that the averments of fact set forth in this Affidavit are true and correct to the best of his knowledge, information, and belief:

Robert A. Wiesemann
Robert A. Wiesemann, Manager
Licensing Programs

Sworn to and subscribed
before me this 2nd day
of June 1976.

James J. Hume
Notary Public

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MY COMMISSION EXPIRES APR. 15, 1978

- (1) I am Manager, Licensing Programs, in the Pressurized Water Reactor Systems Division, of Westinghouse Electric Corporation and as such, I have been specifically delegated the function of reviewing the proprietary information sought to be withheld from public disclosure in connection with nuclear power plant licensing or rule-making proceedings, and am authorized to apply for its withholding on behalf of the Westinghouse Water Reactor Divisions.
- (2) I am making this Affidavit in conformance with the provisions of 10 CFR Section 2.790 of the Commission's regulations and in conjunction with the Westinghouse application for withholding accompanying this Affidavit.
- (3) I have personal knowledge of the criteria and procedures utilized by Westinghouse Nuclear Energy Systems in designating information as a trade secret, privileged or as confidential commercial or financial information.
- (4) Pursuant to the provisions of paragraph (b)(4) of Section 2.790 of the Commission's regulations, the following is furnished for consideration by the Commission in determining whether the information sought to be withheld from public disclosure should be withheld.
 - (i) The information sought to be withheld from public disclosure is owned and has been held in confidence by Westinghouse.

- (ii) The information is of a type customarily held in confidence by Westinghouse and not customarily disclosed to the public. Westinghouse has a rational basis for determining the types of information customarily held in confidence by it and, in that connection, utilizes a system to determine when and whether to hold certain types of information in confidence. The application of that system and the substance of that system constitutes Westinghouse policy and provides the rational basis required.

Under that system, information is held in confidence if it falls in one or more of several types, the release of which might result in the loss of an existing or potential competitive advantage, as follows:

- (a) The information reveals the distinguishing aspects of a process (or component, structure, tool, method, etc.) where prevention of its use by any of Westinghouse's competitors without license from Westinghouse constitutes a competitive economic advantage over other companies.
- (b) It consists of supporting data, including test data, relative to a process (or component, structure, tool, method, etc.), the application of which data secures a competitive economic advantage, e.g., by optimization or improved marketability.

- (c) Its use by a competitor would reduce his expenditure of resources or improve his competitive position in the design, manufacture, shipment, installation, assurance of quality, or licensing a similar product.
- (d) It reveals cost or price information, production capacities, budget levels, or commercial strategies of Westinghouse, its customers or suppliers.
- (e) It reveals aspects of past, present, or future Westinghouse or customer funded development plans and programs of potential commercial value to Westinghouse.
- (f) It contains patentable ideas, for which patent protection may be desirable.
- (g) It is not the property of Westinghouse, but must be treated as proprietary by Westinghouse according to agreements with the owner.

There are sound policy reasons behind the Westinghouse system which include the following:

- (a) The use of such information by Westinghouse gives Westinghouse a competitive advantage over its competitors. It is, therefore, withheld from disclosure to protect the Westinghouse competitive position.

- (b) It is information which is marketable in many ways. The extent to which such information is available to competitors diminishes the Westinghouse ability to sell products and services involving the use of the information.
- (c) Use by our competitor would put Westinghouse at a competitive disadvantage by reducing his expenditure of resources at our expense.
- (d) Each component of proprietary information pertinent to a particular competitive advantage is potentially as valuable as the total competitive advantage. If competitors acquire components of proprietary information, any one component may be the key to the entire puzzle, thereby depriving Westinghouse of a competitive advantage.
- (e) Unrestricted disclosure would jeopardize the position of prominence of Westinghouse in the world market, and thereby give a market advantage to the competition in those countries.
- (f) The Westinghouse capacity to invest corporate assets in research and development depends upon the success in obtaining and maintaining a competitive advantage.

- (iii) The information is being transmitted to the Commission in confidence and, under the provisions of 10 CFR Section 2.790, it is to be received in confidence by the Commission.
- (iv) The information is not available in public sources to the best of our knowledge and belief.
- (v) The proprietary information sought to be withheld in this submittal is that which is appropriately marked in the attachment to Westinghouse letter No. NS-CE-1110, Eicheltinger to Ippolito dated June 22, 1976 concerning slides that are part of a presentation on the Westinghouse New Integrated Protection System. The letter and attachment are being submitted in response to the NRC's request for additional information as a result of the NRC/Westinghouse meeting on May 26, 1976.

This information is part of that which will enable Westinghouse to:

- (a) Apply for patent protection.
- (b) Optimize protection system and breaker and channel bypass designs.
- (c) Assist its customers to obtain licenses.
- (d) Justify the design basis for integrated protection system.
- (e) Optimize on-line testing reliability.

Further this information has substantial commercial value as follows:

- (a) Westinghouse plans to sell the equipment described in part by the information.
- (b) Westinghouse plans to sell the use of the information to its customers for purposes of meeting NRC requirements for licensing documentation.

Public disclosure of this information is likely to cause substantial harm to the competitive position of Westinghouse because (1) it would result in the loss of valuable patent rights, and (2) it would enable others to use the information for commercial purposes and also to meet NRC requirements for licensing documentation, each without purchasing the right from Westinghouse to use the information.

The technology is in the evolving state in applications using large numbers of microprocessors. A microprocessor-based protection system will allow a significant commercial advantage to any Nuclear Steam Systems Supplier in terms of performance and cost. The schedule and scope of prototype testing is aimed at verifying the design so that Westinghouse can market the system at the earliest practical time. Premature release of information on the testing could destroy the competitive position of Westinghouse. Building and testing the prototype will cost Westinghouse over \$500,000. Westinghouse will expend 15 man years of preparation time this year in planning

and coordinating details of the testing before starting to build the prototype. Being an innovative concept, this information might never be discovered by the competitors of Westinghouse independently. To duplicate this information, competitors would first have to be similarly inspired and would then have to expend an effort similar to that of Westinghouse to develop the design.

Further the deponent sayeth not.