



Westinghouse Electric Corporation

Power Systems

Box 355
Pittsburgh Pennsylvania 15230

September 29, 1976
AW-76-42

Mr. John F. Stolz, Chief
Light Water Reactors Project
Division of Project Management
Office of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
7920 Norfolk Avenue
Bethesda, Maryland 20014

APPLICATION FOR WITHHOLDING PROPRIETARY
INFORMATION FROM PUBLIC DISCLOSURE

SUBJECT: WCAP-8822, "Mass and Energy Releases Following a Steam Line Rupture" (Proprietary)

REF: Westinghouse Letter No. NS-CE-1220 Eicheldinger to Stolz
Dated September 29, 1976

Dear Mr. Stolz:

This application for withholding is submitted by Westinghouse Electric Corporation ("Westinghouse") pursuant to the provisions of paragraph (b)(1) of Section 2.790 of the Commission's regulations. Withholding from public disclosure is requested with respect to the subject information which is further identified in the affidavit accompanying this application.

The undersigned has reviewed the information sought to be withheld and is authorized to apply for its withholding on behalf of Westinghouse, WRD, notification of which was sent to the Secretary of the Commission on April 19, 1976.

The affidavit accompanying this application sets forth the basis on which the information may be withheld from public disclosure by the Commission and addresses with specificity the considerations listed in paragraph (b)(4) of Section 2.790 of the Commission's regulations.

Accordingly it is respectfully requested that the subject information which is proprietary to Westinghouse and which is further identified in the affidavit be withheld from public disclosure in accordance with 10 CFR Section 2.790 of the Commission's regulations.

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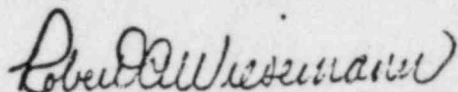
Mr. John F. Stolz

-2-

September 29, 1976
AW-76-42

Correspondence with respect to this application for withholding or the accompanying affidavit should reference AW-76-42 and should be addressed to the undersigned.

Very truly yours,



Robert A. Wieseemann, Manager
Licensing Programs

/smh

Enclosure

cc: J. W. Maynard, Esq.
Office of the Executive Legal Director, NRC

AW-76-42

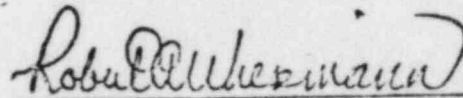
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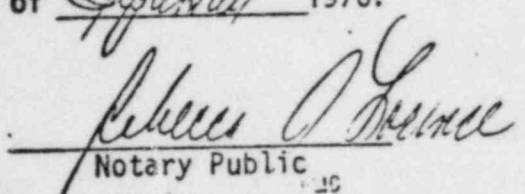
COUNTY OF ALLEGHENY:

Before me, the undersigned authority, personally appeared Robert A. Wieseemann, 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. Wieseemann, Manager
Licensing Programs

Sworn to and subscribed
before me this 30 day
of September 1976.



Notary Public

MY COMMISSION EXPIRES JAN. 15, 1978

AW-76-42

- (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.

-2-

AW-76-42

- (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.

-4-

AW-76-42

- (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 WCAP-8822, "Mass and Energy Releases Following a Steam Line Rupture," (Proprietary), being transmitted by Westinghouse Letter No. NS-CE-1220, Eicheldinger to Stolz, dated September 29, 1976. This report is being submitted pursuant to the NRC's Topical Report Program for generic review by the Regulatory Staff and is expected to be referenced in several license applications.

This information enables Westinghouse to:

- (a) Justify the design basis for emergency systems.
- (b) Assist its customers to obtain licenses.
- (c) Optimize long-term cooling design.

Further, this information has substantial commercial value as follows:

- (a) Westinghouse sells the use of the information to its customers for purposes of meeting NRC requirements for licensing documentation.
- (b) Westinghouse uses the information to perform and justify analyses which are sold to customers.

Public disclosure of this information is likely to cause substantial harm to the competitive position of Westinghouse because it would enable others to use the information to meet NRC requirements for licensing documentation without purchasing the right to use the information.

The development of this information is the result of many years of Westinghouse effort and the expenditure of a considerable sum of money.

In order for competitors of Westinghouse to duplicate this information, similar engineering programs would have to be performed and a significant manpower effort, having the requisite talent and experience, would have to be expended for data analyses and code development.

Further the deponent sayeth not.

Limiting Single Failure for Trojan Steamline
Break Analysis Without Boron Injection Tank

The limiting single failure assumed in the FSAR analysis (with the BIT) as stated on FSAR page 15.1-19 is the loss of full flow delivered by one charging pump to the cold-leg header. Low concentration boric acid (2000 ppm) must be swept from the safety injection downstream of the BIT isolation valve prior to the delivery of high concentration boric acid to the reactor coolant loops. This delays the time for the boron from the BIT (and subsequently the RWST) to reach the core. Once the boron reaches the core, the negative reactivity added by the boron terminates the reactivity addition due to the cooldown. Thus, the less the flow from the charging pump is, the longer the reactivity addition.

For the case without the BIT, the boron concentration in the safety injection lines downstream of the RWST isolation valve is conservatively assumed to be 0 ppm. As in the case with the BIT, the sooner the boric acid water reaches the core, the sooner the reactivity addition transient is terminated. Thus, one would expect that assuming charging flow from two pumps would produce a [$\beta^{+a,c}$] transient than with charging flow from only one pump. Results of generic sensitivity studies performed using the LOFTRAN⁽¹⁾ computer code support this conclusion.

Table 1 lists the key parameters at the time minimum DNBR is predicted. As shown, the case with flow from two charging pumps [

$\beta^{+a,c}$ Thus, it is concluded that the case assuming flow from one charging pump is the worst single failure for the steamline break analysis assuming no BIT.

Reference 1: Burnett, T. W. T., et al, "LOFTRAN Code Description,"
WCAP-7907-A, April, 1984.

WESTINGHOUSE CLASS 3

Table 1: Reactor Conditions at Time of Minimum DNBR

<u>CASE</u>	<u>HEAT/FLUX (Frac)</u>	<u>PRESSURE (PSIA)</u>	<u>INLET-HOT (°F)</u>	<u>INLET-COLD (°F)</u>
Single SI/Charging Pump	[] +a,c
Two SI/Charging Pump				