Westinghouse Electric Corporation

Water Reactor Divisions

Nuclear Technology Division

Box 355
Pittsburgh Pennsylvania 15230

NS-TMA-2455

June 17, 1981

Darrell G. Eisenhut, Director
Division of Licensing
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
7920 Norfolk Avenue
Bethesda, MD 20014

Attention: James J. Shea

Ref. a) NS-TMA-2265 6/30/80
Ref. b) NS-TMA-2387 3/5/81
Ref. c) NS-TMA-2415 3/17/81

Dear Mr. Eisenhut:

Enclosed are:

1. Ten (10) copies of WCAP 9558, Revision 2, "Mechanistic Fracture Evaluation of Reactor Coolant Pipe Containing a Postulated Circumferential Through Wall Crack, May, 1981, Proprietary.

2. Ten (10) copies of WCAP 9570, Revision 2, "Mechanistic Fracture Evaluation of Reactor Coolant Pipe Containing a Postulated Circumferential Through Wall Crack, May, 1981, Non-Proprietary.

3. Ten (10) copies of WCAP 9787, Revision 0, "Tensile and Toughness Properties of Primary Piping Weld Metal for Use in Mechanistic Fracture Evaluation," May, 1981, Proprietary.

4. Ten (10) copies of WCAP 9788, Revision 0, "Tensile and Toughness Properties of Primary Piping Weld Metal for Use in Mechanistic Fracture Evaluation," May, 1981, Non-Proprietary.

Also enclosed is one (1) copy of Application for Withholding AW-81-37.

These reports have been prepared for and are being submitted to the Staff at the request of the Owners Group of Operating Utilities who are participating in an evaluation of the effects of asymmetric LOCA loads on the integrity of the primary reactor coolant system (NRC Task Action Plan NRC-TAP-TOPIC-A-2). The information contained in these reports is only applicable to the plants represented by the Owners Group. Each participating utility will reference the information contained in these reports which is pertinent to the asymmetric LOCA load issue for their particular plant.

WCAP 9558, Revision 2 supersedes Revision 1 of this report which was transmitted to the Staff by Reference (a). Revision 2 of this report has been prepared to address questions raised by the Staff and their consultants on Revision 1. This revision also incorporates the interim revision of Table 5.1 (envelope nozzle loads) which was transmitted to the Staff by Reference (c). This Topical Report provides a detailed mechanistic evaluation of reactor coolant piping base metal properties. This evaluation demonstrates that under the worst combination of loadings, including the effects of safe shutdown earthquake, a realistically postulated flaw will not propagate around the circumference of the pipe and cause a guillotine break.

WCAP 9787 supersedes the interim report of the same title which was transmitted to the Staff by Reference (b). This report presents the results of an investigation undertaken to determine the tensile and fracture toughness of representative reactor coolant system weld samples. The results of the tensile and fracture toughness tests are summarized and the weld metal properties are compared with the same properties of the base metal. It is found that the weld metal properties fall within or above the scatter band of the properties of the base metal. Therefore, the conclusions reached in WCAP-9558, Revision 2 for base metal are equally applicable to weld metal.

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.

Correspondence with respect to the affidavit or application for withholding should reference AW-81-37 and should be addressed to R. A. Wiesemann, Manager, Regulatory and Legislative Affairs, Westinghouse Electric Corporation, P.O. Box 355, Pittsburgh, PA 15230.

Very truly yours,

T. M. Anderson, Manager
Nuclear Safety Department

J. J. McInerney/keg
Enclosure(s)

cc: James R. Miller, NRC Bethesda

Westinghouse Electric Corporation
Water Reactor Divisions

Nuclear Technology Division
Box 355
Pittsburgh Pennsylvania 15230

Mr. Darrell Eisenhut, Director
Division of Licensing
Office of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
7920 Norfolk Avenue
Bethesda, Maryland 20014

June 17, 1981
AW-81-37

APPLICATION FOR WITHHOLDING PROPRIETARY INFORMATION FROM PUBLIC DISCLOSURE

SUBJECT: WCAP-9558, Revision 2, "Mechanistic Fracture Evaluation of Reactor Coolant Pipe Containing a Postulated Circumferential Through Wall Crack," May 1981 and WCAP-9787, Revision 0, "Tensile and Toughness Properties of Primary Piping Weld Metal for Use in Mechanistic Fracture Evaluation," May 1981

REF: Westinghouse Letter No. NS-TMA-2455, Anderson to Eisenhut, dated June 17, 1981

Dear Mr. Eisenhut:

The proprietary material transmitted by the referenced letter is of the same technical type as the proprietary material previously submitted concerning the analysis of the reactor coolant system for postulated loss-of-coolant accident. Further, the affidavit submitted to justify the material on June 15, 1977 is equally applicable to this material.

Accordingly, withholding the subject information from public disclosure is requested in accordance with the previously submitted non-proprietary affidavit and application for withholding, AW-77-27, dated June 15, 1977, a copy of which is attached. The previous submittal was further supported by a proprietary affidavit which was also sent to the Commission on June 15, 1977.

Correspondence with respect to this application for withholding or the accompanying affidavit should reference AW-81-37, and should be addressed to the undersigned.

Very truly yours,

Robert A. Wiesemann

Robert A. Wiesemann, Manager
Regulatory & Legislative Affairs

/bek
Attachment

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 12 day
of June 1977.

Rebecca A. Prince

Notary Public

REBECCA A. LORENCE, NOTARY PUBLIC
MONROEVILLE, ALLEGHENY COUNTY
MY COMMISSION EXPIRES MAR. 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 procedure 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 of 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 attached to Westinghouse Letter Number NS-CE-1460, Eicheldinger to Stello, dated June 15, 1977. The letter and attachment are being submitted in support of the Commission's review of the reactor pressure vessel supports analysis for Indian Point 3.

Public disclosure of the information sought to be withheld is likely to cause substantial harm to the competitive position of Westinghouse, taking into account the value of

the information to Westinghouse, the amount of effort and money expended by Westinghouse in developing the information, and considering the ways in which the information could be acquired or duplicated by others.

Further the deponent sayeth not.