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STD-ES-03-21

May 28, 2003

Document Control Desk
U.S. Nuclear Regulatory Commission
Washington, DC. 20555-0001
ATTENTION: MS. L. C. FIELDS

SUBJECT: Transmittal of WCAP-16103-P, "IRIS Scaling Analysis, Part I" (Proprietary) and WCAP-16103-NP (Non-Proprietary)

Dear Ms. Fields:

Enclosed are copies of topical reports WCAP-16103-P, "IRIS Scaling Analysis, Part I" (Proprietary) and WCAP-16103-NP (Non-Proprietary) related to the pre-licensing review of the International Reactor Innovative And Secure (IRIS) reactor.

The topicals provide a detailed overview of the first two stages of the IRIS Scaling Analysis, Stage 1 (System Decomposition) and Stage 2 (Scale Identification) of the Hierarchical, Two-Tiered Scaling Analysis. Stage 3 (Top-Down System Scaling Analysis) and Stage 4 (Bottom-Up Process Scaling Analysis) will be submitted as Part 2 and Part 3 respectively. We are planning to submit Part 2 (Stage 3) in a few months as a document necessary for NRC review of the proposed IRIS test program. Part 3 (Stage 4) will be prepared later, after resolution of NRC comments on the test program.

Section 3 of this document, "Stage 2 - Scale Identification," contains detailed equations representing the relationships between constituents, phases and geometrical configurations as required to perform Stage 2. We are not requesting staff step-by-step review of these equations which would be very tedious, time consuming and expensive; rather, we are very interested in the staff review and comments regarding the decomposition and physical approach.

Proprietary Submittal

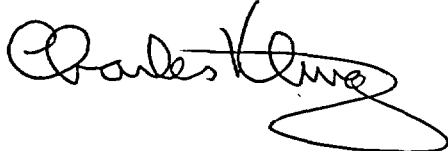
This submittal contains Westinghouse proprietary information of trade secrets, commercial, or financial information which we consider privileged or confidential pursuant to 10 CFR 9.17(a)(4). Therefore, it is requested that the Westinghouse proprietary information attached hereto be handled on a confidential basis and be withheld from public disclosure.

This material is for your internal use only and may be used for the purpose for which it is submitted. It should not be otherwise used, disclosed, duplicated, or disseminated, in whole or in part, to any other person or organisation outside the Commission, the Office of Nuclear

Reactor Regulation, the Office of Nuclear Regulatory Research and the necessary subcontractors that have signed a proprietary non-disclosure agreement with Westinghouse, without the express written approval of Westinghouse.

Correspondence with respect to the application for withholding should reference AW-03-1637, and should be addressed to Hank A. Sepp, Manager of Regulatory Compliance and Plant Licensing, Westinghouse Electric Company, P.O. Box 355, Pittsburgh, Pennsylvania, 15230-0355.

Please contact Milorad Dzodzo (412) 256-1655 or myself (860) 731-6604 if you have any questions concerning the enclosed material.



Charles L. Kling, Licensing Manager
IRIS Project

/Enclosures:

1. AW-03-1637, APPLICATION FOR WITHHOLDING PROPRIETARY INFORMATION FROM PUBLIC DISCLOSURE, May 13, 2003
2. WCAP-16103-P, "IRIS Scaling Analysis, Part I" (Proprietary), April 2003
3. WCAP-16103-NP, "IRIS Scaling Analysis, Part I" (Non-Proprietary), April 2003

cc: M. D. Carelli (W) w/o Enclosures 2&3
C. B. Brinkman (W)
G. Shukla/NRR w/o Enclosures



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Our ref: AW-03-1637
May 13, 2003

APPLICATION FOR WITHHOLDING PROPRIETARY
INFORMATION FROM PUBLIC DISCLOSURE

Subject: WCAP-16103-P, "IRIS Scaling Analysis, Part I" (Proprietary)

The subject report transmitted to the Nuclear Regulatory Commission contains information proprietary to the Westinghouse Electric Company.

The material will not be employed as a part of a license application or other action identified in 10 CFR 2.790(a) at this time. It will be separately submitted with an Application for Withholding accompanied by an affidavit meeting the requirements of 10 CFR 2.790(b) prior to such use.

Accordingly, we request that the material be treated as proprietary information within the provisions of 10 CFR 9.17a(4), "Freedom of Information Act Regulations." If there is a need to make public disclosure of the material prior to a separate Westinghouse submittal for docket in accordance with the provisions of 10 CFR 2.790(a), please notify Westinghouse prior to making a disclosure determination.

Correspondence with respect to the proprietary aspects of this submittal should reference AW-03-1637 and should be addressed to the undersigned.

Very truly yours,

A handwritten signature in black ink, appearing to read 'Ian C. Rickard', written over a horizontal line.

Ian C. Rickard,
Licensing Project Manager
Regulatory Compliance and Plant Licensing

Enclosure

cc: D. G. Holland / NRC

bcc: H. A. Sepp (ECE 4-7A)
C. Brinkman, (Westinghouse Electric Co., 12300 Twinbrook Parkway, Suite 330, Rockville, MD 20852)
RCPL Administrative Aide (ECE 4-7A) (letters w/affidavits only)

- (1) I am the Licensing Project Manager, Regulatory Compliance and Plant Licensing, in Nuclear Services, Westinghouse Electric Company LLC ("Westinghouse"), 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 and rule making proceedings, and am authorized to apply for its withholding on behalf of the Westinghouse Electric Company LLC.
- (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 the Westinghouse Electric Company LLC 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.

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 that 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 of 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 sought to be protected is not available in public sources or available information has not been previously employed in the same original manner or method 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-16103-P, "IRIS Scaling Analysis - Part 1" (Proprietary Class 2), dated April 2003. This report is being transmitted by Westinghouse Electric Company LLC letter and Application for Withholding Proprietary Information from Public Disclosure, to the Document Control Desk.

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

- (a) Describe and apply a hierarchical scaling analysis methodology using concepts from hierarchical theory and time-scale modeling to analyze transient and accident conditions applicable to the IRIS systems, subsystems and modules.
- (b) Develop and verify analytical models.
- (c) Use computer codes to analyze postulated accident conditions.

Further this information has substantial commercial value as follows:

- (a) Westinghouse plans to sell the use of similar information to its customers for purposes of meeting NRC requirements for licensing documentation.
- (b) Westinghouse can sell support and defense of IRIS Design Certification.
- (c) The information requested to be withheld reveals the distinguishing aspects of a methodology that was developed by Westinghouse.

Public disclosure of this proprietary information is likely to cause substantial harm to the competitive position of Westinghouse because it would enhance the ability of competitors to provide similar advanced nuclear power plant designs and to provide licensing defense services for commercial power reactors without commensurate expenses. Also, public disclosure of the information 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 the technology described in part by the information is the result of applying the results of many years of experience in an intensive Westinghouse effort and the expenditure of a considerable sum of money.

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

Further the deponent sayeth not.

PROPRIETARY INFORMATION NOTICE

Transmitted herewith are proprietary and/or non-proprietary versions of documents furnished to the NRC in connection with requests for generic and/or plant-specific review and approval.

In order to conform to the requirements of 10 CFR 2.790 of the Commission's regulations concerning the protection of proprietary information so submitted to the NRC, the information which is proprietary in the proprietary versions is contained within brackets, and where the proprietary information has been deleted in the non-proprietary versions, only the brackets remain (the information that was contained within the brackets in the proprietary versions having been deleted). The justification for claiming the information so designated as proprietary is indicated in both versions by means of lower case letters (a) through (f) located as a superscript immediately following the brackets enclosing each item of information being identified as proprietary or in the margin opposite such information. These lower case letters refer to the types of information Westinghouse customarily holds in confidence as identified in Sections (4)(ii)(a) through (4)(ii)(f) of the affidavit accompanying this transmittal.

COPYRIGHT NOTICE

The reports transmitted herewith each bear a Westinghouse copyright notice. The NRC is permitted to make the number of copies of the information contained in these reports which are necessary for its internal use in connection with generic and plant-specific reviews and approvals as well as the issuance, denial, amendment, transfer, renewal, modification, suspension, revocation, or violation of a license, permit, order, or regulation subject to the requirements of 10 CFR 2.790 regarding restrictions on public disclosure to the extent such information has been identified as proprietary by Westinghouse, copyright protection notwithstanding. With respect to the non-proprietary versions of these reports, the NRC is permitted to make the number of copies beyond those necessary for its internal use which are necessary in order to have one copy available for public viewing in the appropriate docket files in the public document room in Washington, DC and in local public document rooms as may be required by NRC regulations if the number of copies submitted is insufficient for this purpose. Copies made by the NRC must include the copyright notice in all instances and the proprietary notice if the original was identified as proprietary.