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**Project Number 726  
STD-ES-04-38 NOTES**

September 3, 2004

Document Control Desk  
U.S. Nuclear Regulatory Commission  
Washington, DC. 20555-0001  
ATTENTION: MR. J. F. WILLIAMS

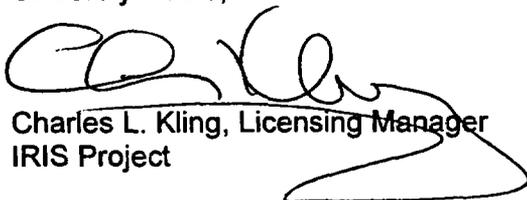
**SUBJECT: Transmittal of WCAP-16318-P, "IRIS Small Break LOCA Phenomena  
Identification and Ranking Table (PIRT)" (Proprietary) and the related WCAP-  
16318-NP (Non-Proprietary)**

Dear Mr. Williams:

Please note the enclosures include the original transmittal letter and a copy of the affidavit along with 2 CDs containing the proprietary and non-proprietary versions of the report respectively.

The original affidavit, with original signatures was inadvertently sent to you on August 17, before we had completed the approval process here at Westinghouse. Please let me know if you cannot find the original affidavit and I will send you another,

Sincerely Yours,

  
Charles L. Kling, Licensing Manager  
IRIS Project

D072



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ATTENTION: MR. J. F. WILLIAMS

**SUBJECT: Transmittal of WCAP-16318-P, "IRIS Small Break LOCA Phenomena Identification and Ranking Table (PIRT)" (Proprietary) and the related WCAP-16318-NP (Non-Proprietary)**

Dear Mr. Williams:

Enclosed on a compact disc are copies of topical reports WCAP-16318-P, "IRIS Small Break LOCA Phenomena Identification and Ranking Table (PIRT)" (Proprietary) and WCAP-16318-NP (Non-Proprietary) related to the pre-licensing review of the International Reactor Innovative and Secure (IRIS) reactor. This topical report contains the background and results of the IRIS Small Break LOCA (SBLOCA) PIRT Project. Addendum 1 to the topical contains the IRIS SBLOCA sensitivity report for PIRT development.

Westinghouse requests NRC concurrence that the relative importance of the phenomena, as well as the current relative state of knowledge for the phenomena, provides a basis for the planning of the ongoing IRIS experimental and analytical efforts.

IRIS has been primarily focused on achieving a design with innovative safety characteristics. The first line of defence in IRIS is to eliminate event initiators that could lead to core damage. In IRIS, this concept is implemented through the "safety by design" approach, which can be simply described as "design the plant in such a way as to eliminate accidents, rather than coping with their consequences."

With the elimination of Large Break LOCA, an important next consideration is to show the IRIS design fulfils the promise of increased safety for the SBLOCA. Accordingly, the IRIS Consortium, through Westinghouse, established the SBLOCA PIRT Project that is documented in the topicals. The primary objective of the IRIS SBLOCA PIRT project was to identify the relative importance of phenomena in the IRIS response to SBLOCAs. This relative importance, coupled with the current relative state of knowledge for the phenomena, provides a framework for the planning of the continued experimental and analytical efforts.

To satisfy the SBLOCA PIRT Project objectives, Westinghouse organized an expert panel whose members were carefully selected to insure the PIRT results reflect internationally recognized experience in reactor safety analysis, and were not biased by program preconceptions internal to the IRIS Program.

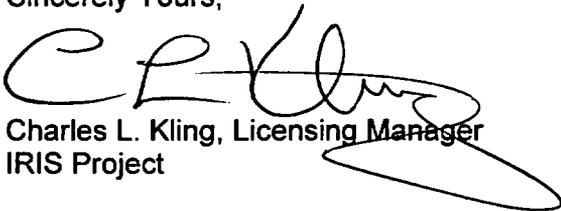
This submittal contains Westinghouse proprietary information of trade secrets, commercial, or financial information which we consider privileged or confidential pursuant to 10 CFR 9.17(a)(4). Therefore, it is requested that the enclosed Westinghouse proprietary information be handled on a confidential 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-04-1878, and should be addressed to James A. Gresham, Manager of Regulatory Compliance and Plant Licensing, Westinghouse Electric Company, P.O. Box 355, Pittsburgh, Pennsylvania, 15230-0355.

Please contact Luca Oriani (412) 256-1692 or myself (860) 731-6604 if you have any questions concerning the enclosed material.

Sincerely Yours,



Charles L. Kling, Licensing Manager  
IRIS Project

/Enclosures:

1. AW-04-1878, APPLICATION FOR WITHHOLDING PROPRIETARY INFORMATION FROM PUBLIC DISCLOSURE, August 17,2004
2. WCAP-16318-P, "IRIS Small Break LOCA Phenomena Identification and Ranking Table (PIRT)" (Proprietary), August 2004
3. WCAP-16318-P, "ADDENDUM 1 – IRIS Small Break LOCA Sensitivity Report for PIRT Development" (Proprietary), August 2004
4. WCAP-16318-NP, "IRIS Small Break LOCA Phenomena Identification and Ranking Table (PIRT)" (Non-Proprietary), August, 2004
5. WCAP-16318-NP, "ADDENDUM 1 – IRIS Small Break LOCA Sensitivity Report for PIRT Development" (Non-Proprietary), August 2004

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

bcc: J. A. Gresham (ECE 4-7A) 1L, 1A  
R. A. Matzie (0428, Windsor) 1L, 1A  
J. E. Goossen (401 2x27A) 1L 1A  
I. C. Rickard (6009-0420, Windsor) 1L, 1A  
R TH Mayson (BNFL, Risley, England) 1L, 1A  
A. Worrall (BNFL, Springfields, England) 1L, 1A  
R. Bastien, (Nivelles, Belgium) 1L, 1A  
L. Ulloa (Madrid, Spain) 1L, 1A  
RLE Administrative Aide (ECE 4-7A) 1L, 1A (letters w/affidavits only)



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Our ref: AW-04-1878  
August 17, 2004

**APPLICATION FOR WITHHOLDING PROPRIETARY  
INFORMATION FROM PUBLIC DISCLOSURE**

Reference:

- (1) WCAP-16318-P Rev 00 (Proprietary) "IRIS Small Break LOCA Phenomena Identification and Ranking Table (PIRT)," August 2004.

Westinghouse hereby transmits the above-referenced proprietary documents for which withholding is requested pursuant to Affidavit AW-04-1878. This affidavit, which accompanies this letter and is signed by the owner of the proprietary information, Westinghouse Electric Company LLC, 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 10 CFR Section 2.390(b)(4) of the Commission's regulations.

In conformance with the requirements of 10 CFR 2.390, Westinghouse confirms that the information contained within the referenced documents is proprietary. The justification for claiming these documents as proprietary is identified in Sections (4)(ii)(a) through (4)(ii)(f) of the enclosed affidavit.

Communication with respect to the proprietary aspects of the application for withholding or the Westinghouse affidavit should reference this letter, AW-04-1878, and 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: W. A. Macon (NRC)

bcc: J. A. Gresham (ECE 4-7A)  
C. B. Brinkman, (Rockville, MD 20852)  
R. Bastien, (Nivelles, Belgium)  
C. L. Kling (Windsor)  
RCPL Administrative Aide (ECE 4-7A)



- (1) I, Ian C. Rickard, depose and say that I am the Licensing Project Manager 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 2.390 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 10 CFR Section 2.390 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 constitute Westinghouse policy and provide 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.
- (iii) There are sound policy reasons behind the Westinghouse system for classification of proprietary information, 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.
- (iv) The information is being transmitted to the Commission in confidence and, under the provisions of 10 CFR Section 2.390, it is to be received in confidence by the Commission.
- (v) 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.
- (vi) The proprietary information sought to be withheld in this submittal is that which is contained in (1) Westinghouse Report WCAP-16318-P Rev 00, "IRIS Small Break LOCA Phenomena Identification and Ranking Table (PIRT)" dated August 2004.

The information is part of a model that will enable Westinghouse to evaluate the probability ranking of potential small break loss-of-coolant accidents in the passive IRIS (International Reactor Innovative and Secure) modular pressurized water reactor with an internal primary system component configuration, and in particular to supporting potential customers in the application of such, including:

- (a) The identification of important phenomena relevant to the potential occurrence of a small break loss-of-coolant accident, including the quantification of dominant failure mechanisms, operational considerations and model implementation, and
- (b) A generic methodology for the applicability of the prioritization and failure ranking criteria to the IRIS passive modular pressurized water reactor.

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 the application and defense of the IRIS phenomena identification and ranking table.
- (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**

In order to conform to the requirements of 10 CFR 2.390 of the Commission's regulations concerning the protection of proprietary information so submitted to the NRC, Westinghouse confirms that the information in Topical Report WCAP-16318-P Rev 00, "IRIS Small Break LOCA Phenomena Identification And Ranking Table," dated August 2004 is proprietary. The justification for claiming this information as proprietary is indicated in Sections (4)(ii)(a) through (4)(ii)(f) of affidavit CAW-04-1831 accompanying this transmittal.

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The information transmitted herewith is copyright by Westinghouse. The NRC is permitted to make the number of copies of the information that 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 2.390 regarding restrictions on public disclosure to the extent such information has been identified as proprietary by Westinghouse, copyright protection notwithstanding. Copies made by the NRC must include the copyright notice in all instances and the proprietary notice if the original was identified as proprietary.