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Our ref: LTR-NRC-04-55

Attn: J. S. Wermiel, Chief
Reactor Systems Branch
Division of Systems Safety and Analysis

September 23, 2004

Subject: "Proposed Technical and Proprietary Changes for the Draft Safety Evaluation for
WCAP-16078-P/WCAP-16078-NP Including Summary Table of Proposed Changes"
(Proprietary/Non-Proprietary)

Enclosed is a copy of "Proposed Technical and Proprietary Changes for the Draft Safety Evaluation for
WCAP-16078-P/WCAP-16078-NP Including Summary Table of Proposed Changes" (Proprietary/Non-
Proprietary).

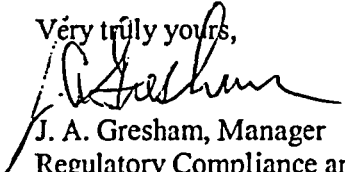
Also enclosed is:

1. One (1) copy of the Application for Withholding, AW-04-1894 (Non-Proprietary) with Proprietary Information Notice.
2. One (1) copy of Affidavit (Non-Proprietary).

This submittal contains proprietary information of Westinghouse Electric Company LLC. In conformance with the requirements of 10 CFR Section 2.390, 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 identified as proprietary may be withheld from public disclosure by the Commission.

Correspondence with respect to this affidavit or Application for Withholding should reference AW-04-1894 and should be addressed to J. A. Gresham, Manager, Regulatory Compliance and Plant Licensing, Westinghouse Electric Company LLC, P.O. Box 355, Pittsburgh, Pennsylvania 15230-0355.

Very truly yours,


J. A. Gresham, Manager
Regulatory Compliance and Plant Licensing

Enclosures

cc: F. M. Akstulewicz/NRR
W. A. Macon Jr./NRR
E. S. Peyton/NRR



Westinghouse

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Our ref: AW-04-1894

September 23, 2004

APPLICATION FOR WITHHOLDING PROPRIETARY
INFORMATION FROM PUBLIC DISCLOSURE

Subject: "Proposed Technical and Proprietary Changes for the Draft Safety Evaluation for
WCAP-16078-P Including Summary Table of Proposed Changes" (Proprietary)

Reference: Letter from J. A. Gresham to J. S. Wermiel, LTR-NRC-04-55, dated September 23, 2004

The Application for Withholding is submitted by Westinghouse Electric Company LLC (Westinghouse), pursuant to the provisions of Paragraph (b) (1) of Section 2.390 of the Commission's regulations. It contains commercial strategic information proprietary to Westinghouse and customarily held in confidence.

The proprietary material for which withholding is being requested is identified in the proprietary version of the subject report. In conformance with 10 CFR Section 2.390, Affidavit AW-04-1894 accompanies this Application for Withholding, setting forth the basis on which the identified proprietary information may be withheld from public disclosure.

Accordingly, it is respectfully requested that the subject information which is proprietary to Westinghouse be withheld from public disclosure in accordance with 10 CFR Section 2.390 of the Commission's regulations.

Correspondence with respect to this Application for Withholding or the accompanying affidavit should reference AW-04-1894 and should be addressed to J. A. Gresham, Manager, Regulatory Compliance and Plant Licensing, Westinghouse Electric Company LLC, P.O. Box 355, Pittsburgh, Pennsylvania 15230-0355.

Very truly yours,

J. A. Gresham, Manager
Regulatory Compliance and Plant Licensing

Enclosures

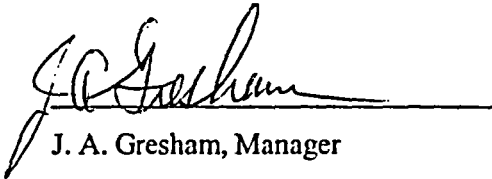
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COMMONWEALTH OF PENNSYLVANIA:

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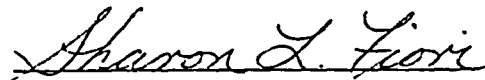
COUNTY OF ALLEGHENY:

Before me, the undersigned authority, personally appeared J. A. Gresham, 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 Company LLC (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:


J. A. Gresham, Manager

Regulatory Compliance and Plant Licensing

Sworn to and subscribed
before me this 23rd day
of September, 2004



Notary Public

Notarial Seal
Sharon L. Fiori, Notary Public
Monroeville Boro, Allegheny County
My Commission Expires January 29, 2007
Member, Pennsylvania Association Of Notaries

- (1) I am 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 Westinghouse.
- (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 Westinghouse 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 2.390 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 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 2.390, 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, "Proposed Technical and Proprietary Changes for the Draft Safety Evaluation for WCAP-16078-P Including Summary Table of Proposed Changes" (Proprietary), dated September 23, 2004, for submittal to the Commission, being transmitted by Westinghouse letter (LTR-NRC-04-55) and Application for Withholding Proprietary Information from Public Disclosure, to the Document Control Desk. The proprietary information as submitted by Westinghouse is that associated with Westinghouse's request for NRC approval of WCAP-16078 – Westinghouse's BWR ECCS Evaluation Model.

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

- (a) Obtain NRC approval of WCAP-16078 Westinghouse's BWR ECCS Evaluation Model: Proposed changes on Proprietary Aspects Including Summary Table of Proposed Changes.
- (b) Perform BWR safety analyses employing Westinghouse safety analysis methodology for SVEA-96 Optima 2 fuel to ensure regulatory limits are met.
- (c) Assist our customer in obtaining enhanced nuclear design input data for fuel reload analysis and designs.

Further this information has substantial commercial value as follows:

- (a) Westinghouse plans to sell the use of this information to its customers for purposes of meeting NRC requirements for licensing documentation.
- (b) Westinghouse can sell support and defense of BWR Loss of Coolant Accident analysis.
- (c) The information requested to be withheld reveals the distinguishing aspects of a methodology which 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 calculations and 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 2.390 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 identified in Sections (4)(ii)(a) through (4)(ii)(f) of the affidavit accompanying this transmittal pursuant to 10 CFR 2.390(b)(1).

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 2.390 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.

**Proposed Technical and Proprietary Changes for the Draft Safety Evaluation for
WCAP-16078-NP Including Summary Table of Proposed Changes (Non-
Proprietary)**

Technical Comments

Comment 1

Section 1.0 INTRODUCTION indicates that the change to the counter-current flow correlation is to accommodate the implementation of SVEA-96 fuel. It is suggested that this statement be revised as follows:

- *A change to the counter-current flow limit (CCFL) correlation to apply a conservative bias such that it bounds all the scatter in the correlation database.*

Discussion – [

}^{a,c}

Comment 2

It is suggested that Item D.7 in Section 2.0 be revised to state:

D.7 The Boiling Water Reactor Channel Box Under Spray Cooling

Comment 3

It is suggested that the first sentence of the second paragraph of Section 3.1 General LOCA ECCS Model Features be revised as follows:

When applying this methodology to a new fuel bundle design, new CPR models are needed for the GOBLIN/DRAGON code.

Discussion –[

}^{a,c}

Comment 4

It is suggested that the next to last sentence in the last paragraph of Section 3.1 General LOCA ECCS Model Features be revised as follows:

The staff reviewed the results of the sensitivity cases listed in Table 5-1 of Reference 1 and found that both the use or non-use of level tracking [in the lower plenum]^{a,c} are acceptable.

**Proposed Technical and Proprietary Changes for the Draft Safety Evaluation for
WCAP-16078-NP Including Summary Table of Proposed Changes (Non-
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Discussion – [

] ^{a,c}

Comment 5

It is suggested that the word 'assembly' in the third sentence of the second paragraph of Section 3.2.1 General Design Features be replaced by 'sub-bundle'.

Discussion – [
] ^{a,c}

Comment 6

It is suggested that the fifth sentence of the second paragraph of Section 3.2.1 General Design Features be replaced with the following:

[

] ^{a,c}

Discussion – [

] ^{a,c}

Comment 7

It is suggested that the word 'Thus' be deleted from the next to last sentence in the third paragraph of Section 3.2.1 General Design Features be revised as follows:

Discussion – [

] ^{a,c}

Comment 8

It is suggested that the first bullet item in Section 3.2.1 General Design Features regarding the CCFL correlation changes be deleted.

Discussion – [

] ^{a,c}

**Proposed Technical and Proprietary Changes for the Draft Safety Evaluation for
WCAP-16078-NP Including Summary Table of Proposed Changes (Non-
Proprietary)**

Comment 9

It is suggested that the word 'to' be replaced with the word 'for' in the third sentence of the first paragraph of Section 3.2.2 CCFL Correlation Change as shown below:

...flow downward for a given upward steam flow.

Comment 10

It is suggested that the last sentence of the last paragraph of Section 3.2.2 CCFL Correlation Change be modified as follows:

The staff found that the CCFL model with appropriate geometric parameters is acceptable for applications involving SVEA-96, SVEA-96+ and SVEA-96 Optima2 fuel designs.

Discussion – [

] ^{a,c}

Comment 11

It is suggested that the next to last sentence in the first paragraph of Section 3.2.4 Application to SVEA-96 Optima2 Fuel be revised as follows:

[

] ^{a,c}

Discussion – [

] ^{a,c}

Comment 12

It is suggested that the first sentence of the third paragraph in Section 3.2.4 Application to SVEA-96 Optima2 Fuel be revised as follows:

The CHACHA-3D code is used to perform a detailed fuel rod mechanical and thermal response calculation at a specified axial level of the hot assembly or sub-assembly.

Discussion – [

] ^{a,c}

Comment 13

It is suggested that the word 'ratio' be deleted from the last sentence of the next to last paragraph in Section 3.2.4 Application to SVEA-96 Optima2 Fuel

Discussion – [

] ^{a,c}

**Proposed Technical and Proprietary Changes for the Draft Safety Evaluation for
WCAP-16078-NP Including Summary Table of Proposed Changes (Non-
Proprietary)**

Comment 14

It is suggested that the second sentence of the third item in the number list of Section 4.0 CONDITIONS AND LIMITATIONS be revised as follows:

If the transition core analysis indicates that the system performance of the mixed-core is more limiting than the full-core analysis of legacy fuel, Westinghouse will request the utility to contact the legacy fuel vendor for an evaluation of the impact of the mixed core on the MAPLHGR limits for their fuel.

Discussion – [

] ^{a,c}

Comment 15

The name of the fuel design indicated in the first item in the number list of Section 5.0 CONCLUSION should be 'SVEA-96 Optima2' rather than 'SVEA-96+'.

Comment 16

It is suggested that the second item in the number list of Section 5.0 CONCLUSION be modified as follows:

Use of the level-tracking model in the lower plenum of the GOBLIN vessel model is optional.

Discussion – [

] ^{a,c}

Proprietary Information

Item 1

The description of the CCFL correlation in paragraph 3 of Section 3.2.2 CCFL Correlation Change should be marked proprietary as shown in the markup.

Item 2

The description of the CCFL correlation in paragraph 4 of Section 3.2.2 CCFL Correlation Change should be marked proprietary as shown in the markup.