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U.S. Nuclear Regulatory Commission
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Washington, DC 20555-0001

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LTR-NRC-11-71
December 20, 2011

Subject: Submittal of WCAP-17483-P, Revision 0 and WCAP-17483-NP, Revision 0, "Westinghouse Methodology for Spent Fuel Pool and New Fuel Rack Criticality Safety Analysis" (Proprietary/Non-Proprietary)

Enclosed are Proprietary and Non-Proprietary copies of WCAP-17483-P, Revision 0 and WCAP-17483-NP, Revision 0, "Westinghouse Methodology for Spent Fuel Pool and New Fuel Rack Criticality Safety Analysis," dated December 2011. This topical report provides a generic methodology for use in the criticality safety analysis of spent and new fuel storage racks. Approval of this topical report is requested by June 30, 2013.

To aid in the NRC staff's review of the topical report, a roadmap has been provided as part of this cover letter (Item 3 below) comparing the content of the topical report to the review requirements of Interim Staff Guidance DSS-ISG-2010-01.

Also enclosed is:

1. One (1) copy of the Application for Withholding Proprietary Information from Public Disclosure, AW-11-3337 (Non-Proprietary), with Proprietary Information Notice and Copyright Notice.
2. One (1) copy of Affidavit (Non-Proprietary).
3. Table 1: Correspondence of WCAP-17483-P to DSS-ISG-2010-1

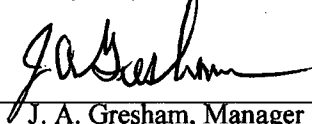
This submittal contains proprietary information of Westinghouse Electric Company LLC. In conformance with the requirements of 10 CFR Section 2.390, as amended, of the Commission's regulations, we are enclosing with this submittal an Application for Withholding Proprietary Information from Public Disclosure 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.

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In support of NRR's prioritization efforts, the following prioritization scheme matrix was completed and justification for the points assigned is provided on the following page.

Correspondence with respect to the proprietary aspects of the application for withholding or the Westinghouse affidavit should reference AW-11-3337 and should be addressed to J. A. Gresham, Manager, Regulatory Compliance, Westinghouse Electric Company LLC, Suite 428, 1000 Westinghouse Drive, Cranberry Township, Pennsylvania 16066.

Very truly yours,



J. A. Gresham, Manager
Regulatory Compliance

Enclosures

cc: E. Lenning
A. Mendiola

TR Prioritization Scheme Matrix			
*Industry input on shaded areas was not requested.			
Factors	Select the Criteria That the TR satisfies	Points Assigned For Each Criteria	Total Points (if points are cumulative, total them for each factor in this column)
TR Classification (Points are cumulative)	Generic Safety Issue	6	1
	Emergent Technical Issue	3	
	Standard TR	1	
Applicability (Points are not cumulative)	Industry-wide Implementation	3	2
	Applicable to entire groups of licensees (BWROG, PWROG, BWRVIP, etc.)	2	
	Applicable only to partial groups of licensees	1	
Specialized Resource Availability (Points are cumulative)	NRC staff expertise is readily available (The NRC staff will evaluate this criteria)	1.5	0.5
	Technical data is available/readily accessible (The NRC staff will evaluate this criteria)	1	
	A SE is requested by a certain date (less than two years) to support a licensing activity. Provide justification.	0.5	
Total Points (Add the total points from each factor and total here):			3.5

TR Classification: This topical report contains the methodology Westinghouse intends to apply during criticality safety analyses.

Applicability: This topical report is applicable to criticality safety analyses performed for all UO₂ fueled Pressurized Water Reactors.

Specialized Resource Availability: The SER for the attached topical report is requested by June 30, 2013 in order to support the implementation of this methodology for upcoming criticality safety license amendment requests.



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AW-11-3337

December 20, 2011

APPLICATION FOR WITHHOLDING PROPRIETARY
INFORMATION FROM PUBLIC DISCLOSURE

Subject: WCAP-17483-P, "Westinghouse Methodology for Spent Fuel Pool and New Fuel Rack
Criticality Safety Analysis" (Proprietary)

Reference: ~~Letter from J. A. Gresham to Document Control Desk, LTR-NRC-11-71, dated
December 20, 2011~~

The Application for Withholding Proprietary Information from Public Disclosure 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-11-3337 accompanies this Application for Withholding Proprietary Information from Public Disclosure, 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-11-3337 and should be addressed to J. A. Gresham, Manager, Regulatory Compliance, Westinghouse Electric Company LLC, Suite 428, 1000 Westinghouse Drive, Cranberry Township, Pennsylvania 16066.

Very truly yours,

A handwritten signature in black ink, appearing to read 'J. A. Gresham', written over a horizontal line.

J. A. Gresham, Manager
Regulatory Compliance

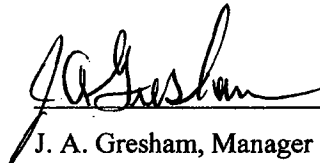
AFFIDAVIT

COMMONWEALTH OF PENNSYLVANIA:

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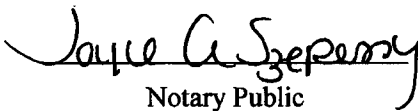
COUNTY OF BUTLER:

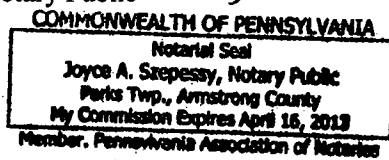
Before me, the undersigned authority, personally appeared J. A. Gresham, who, being by me duly sworn according to law, deposes and says that he is authorized to execute this Affidavit on behalf of Westinghouse Electric Company LLC (Westinghouse), and that the averments of fact set forth in this Affidavit are true and correct to the best of his knowledge, information, and belief:



J. A. Gresham, Manager
Regulatory Compliance

Sworn to and subscribed before me
this 20th day of December 2011


Notary Public



- (1) I am Manager, Regulatory Compliance, 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 Proprietary Information from Public Disclosure 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 in WCAP-17483-P, "Westinghouse Methodology for Spent Fuel Pool and New Fuel Rack Criticality Safety Analysis" (Proprietary), dated December 2011, for submittal to the Commission, being transmitted by Westinghouse letter, LTR-NRC-11-71, 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 the methods used to analyze spent fuel pools and new fuel racks.

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

- (a) Assist customers in analyzing the spent fuel pool and new fuel racks to ensure criticality does not occur.

Further this information has substantial commercial value as follows:

- (a) Assist customer to obtain license changes.
- (b) 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 fuel design 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.

Table 1: Correspondence of WCAP-17483-P to DSS-ISG-2010-1			
DSS-ISG-2010-1 Section Number	DSS-ISG-2010-1 Section Title	DSS-ISG-2010-1 Topic	WCAP-17483-P Section Number
1	Fuel Assembly Selection	-	4.1
2	Depletion Analysis	Depletion Uncertainty	6.1.12
		Reactor Parameters	5.4
		Burnable Absorbers	5.4.6
		Hafnium Flux Suppressor Inserts	5.4.6
		Rodded Operation	5.4.7
3	Criticality Analysis	Axial Burnup Profile	5.3
		Rack Model Description	4.2, 4.3, 6.1
		Rack Materials and Dimensions	4.3
		Neutron Absorber Efficiency	6.1.18
		Interface Analysis	6.7.3
		Normal Conditions	9.1-9.3
		Accident Conditions	7.3
4	Criticality Code Validation	Area of Applicability	3.4
		HTC Critical Experiments	3.3.5
		Trend Analysis	3.3.7
		Statistical Treatment	3.3.7, 3.3.8
		Lumped Fission Products	3.1