

L-PI-16-040
Enclosure 4

NSPM

Westinghouse-Prepared RAI Responses

CE-16-237, Attachment 2

Non-Proprietary

5 pages follow

RAI 1

The burnup requirement coefficients given in WCAP-17400-P, Revision 1, Tables S5-2 through S5-10, are derived, by a curve fitting procedure, using the results from a series of depletion calculations that correspond to a specific average fuel assembly burnup and fuel enrichment. Provide the burnup values used to define the burnup requirement coefficients given in WCAP-17400, Revision 1, Tables S5-2 through S5-10, so that the validity of the coefficients can be confirmed.

Response:

The response to RAI 1 pertains to the burnup requirement coefficients given in Reference 1, WCAP-17400-P, Supplement 1, Revision 1, Tables S5-2 through S5-10. Tables 1 through 6 provide the actual calculated Burnup Requirements associated with the target k_{eff} values listed in Tables S4-1 through S4-4 of WCAP-17400-P, Supplement 1, Revision 1. These values were used to define the burnup requirement coefficients given in WCAP -17400-P, Supplement 1, Revision 1, Tables S5-2, S5-4, S5-6, S5-8 and S5-10.

Table 1 Fuel Category 2 Determined Burnup Requirements (GWd/MTU)					
Decay Time (yr)	wt% ²³⁵ U				
		2.90	3.40	4.00	4.50

a,c

Table 2 Fuel Category 3 Determined Burnup Requirements (GWd/MTU)					
Decay Time (yr)	wt% ²³⁵ U				
		2.50	3.40	4.00	4.50

a,c

Table 3 Fuel Category 4 Determined Burnup Requirements (GWd/MTU)					
Decay Time (yr)	wt% ²³⁵ U				
		1.80	3.40	4.00	4.50

a,c

Table 4 Array D, Category 5 Determined Burnup Requirements (GWd/MTU)					
Decay Time (yr)	wt% ²³⁵ U				
	1.75	3.40	4.00	4.50	5.00

a,c

Table 5 Array G, Category 5 Determined Burnup Requirements (GWd/MTU)					
Decay Time (yr)	wt% ²³⁵ U				
	1.80	3.40	4.00	4.50	5.00

a,c

Table 6 Fuel Category 6 Determined Burnup Requirements (GWd/MTU)					
Decay Time (yr)	wt% ²³⁵ U				
	1.70	3.40	4.00	4.50	5.00

a,c

RAI 3

The methodology used for fuel temperature modeling during depletion is unchanged relative to that approved by the NRC staff in WCAP-17400-P, Revision 0. However, the NRC staff notes that []^{a,c} have changed, and these are inputs to the []^{a,c}. Confirm that fuel temperature effects based on the new fuel design have been appropriately incorporated into the depletion analysis.

Response:

Section S3.3.3.3 indicates that to be consistent with the current analysis of record (WCAP-17400-P), all [

the values are updated conservatively in this analysis, Westinghouse confirms that the fuel temperature effects based on the new fuel design have been appropriately incorporated into the depletion analysis.]^{a,c} Since

RAI 4

To derive the assembly average power, [

] ^{a,c} Because of the potential for the fuel design change to impact the [
] ^{a,c}, explain why the [
] ^{a,c} in WCAP-17400-P, Revision 1, remains valid.

Response:

The [

] ^{a,c}

WCAP-17400-P indicated a [

] ^{a,c} The planned EPU was discussed in WCAP-17400-P.
 However, the EPU was never performed. The [

] ^{a,c}

RAI 5

WCAP-17400-P, Revision 1, Section S4.5.1.2, "Multiple Assembly Misload into the Storage Racks," states that the [

in a calculated k-effective less than 0.95. Confirm that []^{a,c}, results
part of this calculation as is stated in Section S3.7, "KENO Modeling Assumptions."]^{a,c} is not credited as

Response:

Westinghouse confirms that []^{a,c} is not credited as part of the calculation as is stated in Section S3.7, "KENO Modeling Assumptions."

L-PI-16-040
Enclosure 5

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Westinghouse Affidavit

CAW-16-4420

7 pages follow



Westinghouse Electric Company
1000 Westinghouse Drive
Cranberry Township, Pennsylvania 16066
USA

U.S. Nuclear Regulatory Commission
Document Control Desk
11555 Rockville Pike
Rockville, MD 20852

Direct tel: (412) 374-4643
Direct fax: (724) 940-8560
e-mail: greshaja@westinghouse.com

CAW-16-4420

May 16, 2016

APPLICATION FOR WITHHOLDING PROPRIETARY
INFORMATION FROM PUBLIC DISCLOSURE

Subject: Suggested Responses to the Nuclear Regulatory Commission Request for Additional Information Concerning WCAP-17400-P, Supplement 1, Revision 1 for the Prairie Island Nuclear Generating Station License Amendment Request ML15327A244 (Proprietary)

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 information for which withholding is being requested in the above-referenced report is further identified in Affidavit CAW-16-4420 signed by the owner of the proprietary information, Westinghouse Electric Company LLC. The Affidavit, which accompanies this letter, 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 paragraph (b)(4) of 10 CFR Section 2.390 of the Commission's regulations.

Accordingly, this letter authorizes the utilization of the accompanying Affidavit by Xcel Energy Incorporated.

Correspondence with respect to the proprietary aspects of the Application for Withholding or the Westinghouse Affidavit should reference CAW-16-4420, and should be addressed to James A. Gresham, Manager, Regulatory Compliance, Westinghouse Electric Company, 1000 Westinghouse Drive, Building 3 Suite 310, Cranberry Township, Pennsylvania 16066.

A handwritten signature in black ink, appearing to read 'J. A. Gresham'.

James A. Gresham, Manager
Regulatory Compliance

CAW-16-4420

May 16, 2016

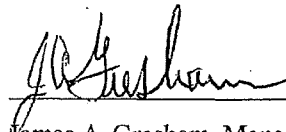
AFFIDAVIT

COMMONWEALTH OF PENNSYLVANIA:

ss

COUNTY OF BUTLER:

I, James A. Gresham, am 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 my knowledge, information, and belief.



James A. Gresham, Manager

Regulatory Compliance

- (1) I am Manager, Regulatory Compliance, 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 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 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, 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 appropriately marked in NF-XCEL-16-41 P-Attachment, "Suggested Responses to the Nuclear Regulatory Commission Request for Additional Information Concerning WCAP-17400-P, Supplement 1, Revision 1 for the Prairie Island Nuclear Generating Station License Amendment Request ML15327A244" (Proprietary), for submittal to the Commission, being transmitted by Xcel Energy Incorporated letter 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-17400-P/WCAP-17400-NP, Supplement 1, Revision 1, and may be used only for that purpose.
- (a) This information is part of that which will enable Westinghouse to obtain NRC approval of WCAP-17400-P/WCAP-17400-NP, Supplement 1, Revision 1,

“Prairie Island Units 1 and 2 Spent Fuel Pool Criticality Safety Analysis Supplemental Analysis for the Storage of IFBA Bearing Fuel.”

- (b) Further, this information has substantial commercial value as follows:
- (i) Westinghouse plans to sell the use of similar information to its customers for the purpose of demonstrating the sub-criticality of the spent fuel pool.
 - (ii) Westinghouse can sell support and defense of industry guidelines and acceptance criteria for plant-specific applications.
 - (iii) 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 technical evaluation justifications 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 non-proprietary versions of a document, 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).

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