



Program Management Office
20 International Drive
Windsor, Connecticut 06095

February 1, 2017

OG-17-12

52-006

Document Control Desk
U.S. Nuclear Regulatory Commission
11555 Rockville Pike
Rockville, MD 20852-2738

Subject: PWR Owners Group
Submittal of PWROG-16043-P, Revision 2, "PWROG Program to Address NRC Information Notice 2012-09: "Irradiation Effects on Fuel Assembly Spacer Grid Crush Strength" for Westinghouse and CE PWR Fuel Designs," PA-ASC-1169R2

Reference: **NRC Information Notice 2012-09, "Irradiation Effects on Fuel Assembly Spacer Grid Crush Strength," dated June 28, 2012.**

The purpose of this letter is to submit Pressurized Water Reactor Owners Group (PWROG) Topical Report (TR), PWROG-16043-P, Revision 2, "PWROG Program to Address NRC Information Notice 2012-09: "Irradiation Effects on Fuel Assembly Spacer Grid Crush Strength" for Westinghouse and CE PWR Fuel Designs," in accordance with the Nuclear Regulatory Commission (NRC) TR program for review and acceptance for referencing in regulatory actions. PWROG-16043-P, Revision 2 is provided in Enclosure 1.

PWROG-16043-P, Revision 2 addresses the issue identified in NRC Information Notice 2012-09 by applying the approach that was used to address the End of Life (EOL) effects for the AP1000®¹ Core Reference Report APP-GW-GLR-153, Rev. 1, "AP1000 Core Reference Report." PWROG-16043-P, Revision 2 discusses the applicability for determining fuel assembly characteristics and damping coefficients at EOL conditions and the aspects for which NRC approval is requested. PWROG-16043-P, Revision 2 does not revise and/or modify the current grid and fuel assembly test methods, or the fuel assembly seismic and LOCA analysis methodologies, processes and codes that were previously approved by NRC.

Enclosure 3 contains Westinghouse authorization letter CAW-17-4530, the accompanying affidavit, Proprietary Information Notice, and Copyright Notice.

¹ AP1000 and CE16NGF are a trademark or registered trademark of Westinghouse Electric Company LLC, its Affiliates and/or its Subsidiaries in the United States of America and may be registered in other countries throughout the world. All rights reserved. Unauthorized use is strictly prohibited. Other names may be trademarks of their respective owners.

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PWROG-16043-P, Revision 2, contains information proprietary to Westinghouse Electric Company LLC; therefore it is supported by an affidavit signed by Westinghouse, the owner of the information. The affidavit 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 Section 2.390 of the Commission's regulations.

Accordingly, it is respectfully requested that this 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 the copyright or proprietary aspects of the information identified above or the supporting Westinghouse affidavit should reference CAW-17-4530, and should be addressed to Mr. J. A. Gresham, Manager, Regulatory Compliance, Westinghouse Electric Company LLC, 1000 Westinghouse Drive, Building 3 Suite 310, Cranberry Township, Pennsylvania, 16066.

TR Classification: As discussed above, this TR addresses the issue associated with the irradiation effects on fuel assembly spacer grid strength identified in NRC Information Notice 2012-09, via a generic licensing action, that will be used for evaluating the structural integrity of fuel assemblies under faulted condition loads (seismic and LOCA) for Westinghouse and CE fuel designs at EOL conditions, on a plant-specific basis.

Specialized Resource Availability: This TR is being submitted to the NRC for review and approval so that the NRC approved version can be utilized for performing plant-specific evaluations of the structural integrity of fuel assemblies under faulted condition loads (seismic and LOCA) for Westinghouse and CE fuel designs at EOL conditions. NRC approval of the generic TR will provide a common approach that will be utilized to address the EOL effects on fuel assembly space grid strength in fuel assembly structural integrity evaluations.

This letter transmits four copies of PWROG-16043-P, Revision 2 (Enclosure 1) and one copy of PWROG-16043-NP, Revision 2 (Enclosure 2).

Applicability: This TR is applicable to the Westinghouse and CE Nuclear Steam Supply System (NSSS) plants that are participating in the PWROG program, PA-ASC-1169R2, that developed this TR.

Request for Review Fee Waiver

The PWROG will be requesting that a fee waiver be considered for the NRC review of PWROG-16043-P, Revision 2 pursuant to the provisions of 10 CFR 170.11(a)(1)(ii)(A). PWROG-16043-P provides a common approach that will be utilized to address the EOL effects on fuel assembly space grid strength in fuel assembly structural integrity evaluations. NRC approval of the TR will ensure that the EOL effects on fuel assembly space grid strength in fuel assembly structural integrity evaluations are considered in these evaluations. Therefore the review of this TR will support ongoing

NRC generic regulatory improvements/efforts associated with the issue of EOL effects on fuel assembly space grid strength in fuel assembly structural integrity evaluations.

During the fee waiver decision period, the PWROG respectfully requests the NRC Staff to perform its acceptance review of PWROG-16043-P, Revision 2. The PWROG will assume the responsibility of payment of the NRC review fees accrued both during the acceptance review, and during the review, if the fee waiver is not approved.

NRC Review Schedule

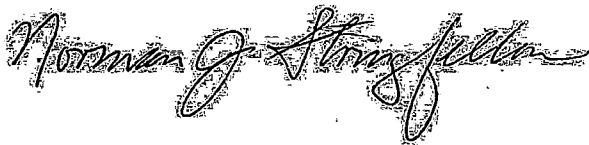
The PWROG requests that the NRC complete their review of the TR by August 2018.

Correspondence related to this transmittal should be addressed to:

Mr. W. Anthony Nowinowski, Program Manager
PWR Owners Group, Program Management Office
Westinghouse Electric Company
1000 Westinghouse Drive
Suite 380
Cranberry Township, Pennsylvania, 16066

If you have any questions, please do not hesitate to contact me at (205) 992-7037 or Mr. W. Anthony Nowinowski, Program Manager of the PWR Owners Group, Program Management Office at (412) 374-6855.

Sincerely yours,



Jack Stringfellow, Chief Operating Officer and Chairman
PWR Owners Group

NJS:WAN

Enclosures 1 and 2: Four copies of PWROG-16043-P, Revision 2, "PWROG Program to Address NRC Information Notice 2012-09: "Irradiation Effects on Fuel Assembly Spacer Grid Crush Strength" for Westinghouse and CE PWR Fuel Designs" (Proprietary) and one copy of PWROG-16043-NP, Revision 2

Enclosure 2: One copy of the Application for Withholding, CAW-17-4530 (Non-proprietary) with the accompanying affidavit, Proprietary Information Notice and Copyright Notice

cc: PWROG Management Committee
PWROG Analysis Committee
PWROG Steering Committee
PWROG Licensing Committee
PWROG PMO
J. Gresham, Westinghouse
J. Andrachek, Westinghouse
J. Moorehead, Westinghouse
B. Benney, US NRC
J. Sinegar, Westinghouse
N. Marshall, Westinghouse
J. Norrell, Westinghouse
R. Lu, Westinghouse
J. Jiang, Westinghouse



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CAW-17-4530

January 30, 2017

APPLICATION FOR WITHHOLDING PROPRIETARY
INFORMATION FROM PUBLIC DISCLOSURE

Subject: PWROG-16043-P, Revision 2, "PWROG Program to Address NRC Information Notice 2012-09: 'Irradiation Effects on Fuel Assembly Spacer Grid Crush Strength' For Westinghouse and CE PWR Fuel Designs" (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 Nuclear Regulatory Commission's ("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-17-4530 signed by the owner of the proprietary information, Westinghouse. 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 Pressurized Water Reactor Owners Group (PWROG).

Correspondence with respect to the proprietary aspects of the Application for Withholding or the Westinghouse Affidavit should reference CAW-17-4530 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 'James A. Gresham'.

James A. Gresham, Manager
Regulatory Compliance

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 declare that the averments of fact set forth in this Affidavit are true and correct to the best of my knowledge, information, and belief.

Executed on: 1/30/17


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 Nuclear Regulatory Commission's ("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.
- (ii) 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 PWROG-16043-P, Revision 2, "PWROG Program to Address NRC Information Notice 2012-09: 'Irradiation Effects on Fuel Assembly Spacer Grid Crush Strength' For Westinghouse and CE PWR Fuel Designs" (Proprietary) for submittal to the Commission, being transmitted by PWROG letter OG-17-12. The proprietary information as submitted by Westinghouse is that associated with addressing IN-2012-09: "Irradiation Effects on Fuel Assembly Spacer Grid Crush Strength" for Westinghouse and Combustion Engineering (CE) PWR fuel designs and may be used only for that purpose.

- (a) This information is part of that which will enable Westinghouse to obtain NRC approval of PWROG-16043-P, Revision 2, "PWROG Program to Address NRC Information Notice 2012-09: 'Irradiation Effects on Fuel Assembly Spacer Grid Crush Strength' For Westinghouse and CE PWR Fuel Designs." (Proprietary)
- (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 addressing IN-2012-09: "Irradiation Effects on Fuel Assembly Spacer Grid Crush Strength."
 - (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).

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.

Letter for Transmittal to the NRC

The following paragraphs should be included in your letter to the NRC Document Control Desk:

Enclosed are:

1. PWROG-16043-P, Revision 2, "PWROG Program to Address NRC Information Notice 2012-09: 'Irradiation Effects on Fuel Assembly Spacer Grid Crush Strength' For Westinghouse and CE PWR Fuel Designs" (Proprietary)
2. PWROG-16043-NP, Revision 2, "PWROG Program to Address NRC Information Notice 2012-09: 'Irradiation Effects on Fuel Assembly Spacer Grid Crush Strength' For Westinghouse and CE PWR Fuel Designs" (Non-Proprietary)

Also enclosed are the Westinghouse Application for Withholding Proprietary Information from Public Disclosure, CAW-17-4530, accompanying Affidavit, Proprietary Information Notice, and Copyright Notice.

As Item 1 contains information proprietary to Westinghouse Electric Company LLC ("Westinghouse"), it is supported by an Affidavit signed by Westinghouse, the owner of the information. The Affidavit sets forth the basis on which the information may be withheld from public disclosure by the Nuclear Regulatory Commission ("Commission") and addresses with specificity the considerations listed in paragraph (b)(4) of Section 2.390 of the Commission's regulations.

Accordingly, it is respectfully requested that the 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 the copyright or proprietary aspects of the item listed above or the supporting Westinghouse Affidavit should reference CAW-17-4530 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.