



Program Management Office  
1000 Westinghouse Drive  
Cranberry Township, PA 16066

WCAP-17661-P/NP, Revision1  
Project Number 694

January 2, 2014

OG-13-427

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

Subject: PWR Owners Group  
**Submittal of WCAP-17661-P/NP, Revision 1, "Improved RAOC and CAOC F<sub>Q</sub> Surveillance Technical Specifications," PA-LSC-0795**

References:

1. NUREG-1431, "Standard Technical Specifications Westinghouse Plants"
2. Westinghouse Nuclear Safety Advisory Letter, NSAL-09-5, "Relaxed Axial Offset Control FQ Technical Specification Actions," Revision 1
3. OG-10-349, "PWR Owners Group, Generic Licensing Action to Address Westinghouse Nuclear Safety Advisory Letter, NSAL-09-5, "Relaxed Axial Offset Control FQ Tech Spec Actions" (PA-LSC-0680)," October 12, 2010
4. NRC letter, "Response to Pressurized Water Reactor Owners Group Letter Regarding Non-Conservative Technical Specifications and Timely Submittal of a License Amendment Request," January 21, 2011

The purpose of this letter is to submit Pressurized Water Reactor Owners Group (PWROG) Topical Report (TR), WCAP-17661-P/NP, Revision 1, "Improved RAOC and CAOC F<sub>Q</sub> Surveillance Technical Specifications", in accordance with the Nuclear Regulatory Commission (NRC) TR program for review and acceptance for referencing in regulatory actions. WCAP-17661-P/NP, Revision 1 is provided in Enclosures 1 and 2.

WCAP-17661-P/NP, Revision1 addresses two primary issues associated with current Required Action B.1 and the RAOC F<sub>Q</sub> Surveillance formulation in Technical Specification (TS) 3.2.1B "Heat Flux Hot Channel Factor (F<sub>Q</sub>(Z) (RAOC-W(Z) Methodology)," in NUREG-1431 (Reference 1):

1. Potential non-conservatisms in the axial flux difference (AFD) reduction Required Action (B.1), and
2. Sensitivity of the formulation to the differences between the measured and predicted surveillance power shapes at both nominal and part power conditions.

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WCAP-17661-P/NP provides the technical justification for the TS changes required to address the potentially non-conservative Required Actions for Condition B of TS 3.2.1B. The TR identifies the appropriate Required Actions when the LCO (transient  $F_Q$  limit) is not met, and will replace the interim actions that were recommended to be administratively implemented, as identified in NSAL-09-5, Revision 1 (Reference 2). The improved RAOC  $F_Q$  Surveillance formulation reduces the sensitivity to differences between measured and predicted axial offset, and improves the accuracy of part-power surveillances. Other improvements have also been incorporated into the revised TS 3.2.1B.

This TR also provides the technical justification for TS changes to TS 3.2.1C "Heat Flux Hot Channel Factor ( $F_Q(Z)$  (CAOC-W(Z) Methodology)," in NUREG-1431 (Reference 1). The changes to TS 3.2.1C include an improved CAOC  $F_Q$  Surveillance formulation that permits adjustment of the surveillance to the target axial offset (AO) core conditions, and a Required Action that implements a reduced CAOC operating space, instead of a power reduction, when the LCO (transient  $F_Q$  limit) is not met.

As discussed in Reference 4, this TR is being submitted as a generic licensing action to correct the non-conservative TS identified in NSAL-09-5, Revision 1 (Reference 2), and constitutes "timely fashion," as discussed in Administrative Letter 98-10, for licensees to address this non-conservative TS. Reference 4 stated: "...the NRC staff believes that submittal of plant-specific license amendment requests (LARs) requesting adoption of the NSAL-09-05 interim recommended actions on a permanent basis should be deferred until a TS Task Force (TSTF) traveler or other generic resolution has been prepared by the PWROG and approved by the NRC. The NRC staff believes it would be more efficient to review a single, generic licensing action rather than to review a large number of plant-specific LARs."

Appendices A and B of the TR contain the revised TS 3.2.1B and Bases markups. Appendices D and E contain the revised TS 3.2.1C and Bases markups. A TSTF traveler that contains these TS and Bases changes will be submitted after the Draft Safety Evaluation is issued for the TR.

Enclosure 3 contains Westinghouse authorization letter CAW-13-3853, the accompanying affidavit, Proprietary Information Notice, and Copyright Notice.

WCAP-17661-P, Revision 1, 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-13-3853, and should be

addressed to Mr. J. A. Gresham, Manager, Regulatory Compliance, Westinghouse Electric Company LLC, P.O. Box 355, Pittsburgh, Pennsylvania 15230-0355.

**TR Classification:** As discussed above, this TR addresses the non-conservative TS identified in NSAL-09-5, Revision 1, and the other issues associated with these current TS. NRC review and approval of WCAP-17661-P/NP will resolve these issues via a generic licensing action, as opposed to via plant-specific LARs, which will ensure the most efficient use of both NRC and licensee resources.

**Specialized Resource Availability:** This TR is being submitted to the NRC for review and approval so that it can be referenced in plant-specific LARs. NRC approval of the generic TR will reduce the impact on both licensee and NRC resources in the both the preparation of, and NRC review of LARs that will be submitted to address the issues associated with these TS.

This letter transmits four copies of WCAP-17661-P, Revision 1 (Enclosure 1), and two copies of WCAP-17661-NP, Revision 1 (Enclosure 2). NRC approval of the enclosed TR will provide the justification for the changes to TS 3.2.1B and 3.2.1C, and the Bases in NUREG-1431.

**Applicability:** This TR is applicable to the Westinghouse Nuclear Steam Supply System (NSSS) plants participating in the PWROG program that developed this Topical Report, PA-LSC-0795, "Improved F<sub>Q</sub> Technical Specification Development – Full Scope".

Correspondence related to this transmittal should be addressed to:

Mr. W. Anthony Nowinowski, Program Manager  
PWR Owners Group, Program Management Office  
Westinghouse Electric Company  
Mail Stop ECE 5-16  
P.O. Box 355  
Pittsburgh, Pennsylvania 15230-0355

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, Chairman  
PWR Owners Group

CMH:NJS:rfr

- Enclosure 1. Four copies of WCAP-17661-P, Revision 1, "Improved RAOC and CAOC F<sub>Q</sub> Surveillance Technical Specifications" (Proprietary)
- Enclosure 2: Two copies of WCAP-17661-NP, Revision 1, "Improved RAOC and CAOC F<sub>Q</sub> Surveillance Technical Specifications" (Non-Proprietary)
- Enclosure 3: One copy of the Application for Withholding, CAW-13-3853 (Non-proprietary) with the accompanying affidavit, Proprietary Information Notice and Copyright Notice.

cc: PWROG Management Committee  
PWROG Licensing Subcommittee  
PWROG Steering Committee  
PWROG PMO  
J. Gresham, Westinghouse  
R. Ankney, Westinghouse  
W. Boyd, Westinghouse  
K. Drudy, Westinghouse  
J. Andrachek, Westinghouse  
J. Moorehead, Westinghouse  
D. Olinski, Westinghouse  
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U.S. Nuclear Regulatory Commission  
Document Control Desk  
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CAW-13-3853

December 4, 2013

APPLICATION FOR WITHHOLDING PROPRIETARY  
INFORMATION FROM PUBLIC DISCLOSURE

Subject: WCAP-17661-P, Revision 1, "Improved RAOC and CAOC F<sub>Q</sub> Surveillance Technical Specifications" (Proprietary)

The proprietary information for which withholding is being requested in the above-referenced report is further identified in Affidavit CAW-13-3853 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 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-13-3853 and should be addressed to James A. Gresham, Manager, Regulatory Compliance, Westinghouse Electric Company, Suite 310, 1000 Westinghouse Drive, Cranberry Township, Pennsylvania 16066.

: Very truly yours,

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

James A. Gresham, Manager  
Regulatory Compliance

Enclosures

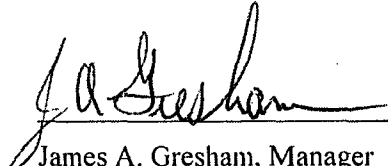
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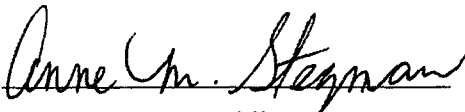
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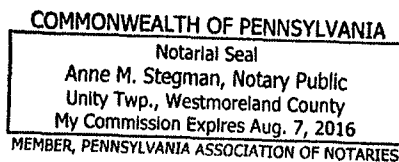
COUNTY OF BUTLER:

Before me, the undersigned authority, personally appeared James 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:

  
James A. Gresham, Manager  
Regulatory Compliance

Sworn to and subscribed before me  
this 4th day of December 2013

  
Notary Public



- (1) I am Manager, Regulatory Compliance, in Engineering, Equipment and Major Projects, 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.
- (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, 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 appropriately marked in WCAP-17661-P, Revision 1, "Improved RAOC and CAOC F<sub>Q</sub> Surveillance Technical Specifications "(Proprietary), dated November 2013, for submittal to the Commission, being transmitted by PWROG letter OG-13-427 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-17661, and may be used only for that purpose.

- (a) This information is part of that which will enable Westinghouse to:
  - (i) Obtain NRC approval of WCAP-17661, "Improved RAOC and CAOC F<sub>Q</sub> Surveillance Technical Specifications"
  - (ii) Develop an improved F<sub>Q</sub> Technical Specification (TS) that addresses issues associated with the current TS. Specifically, the new TS will minimize, to the extent possible, the sensitivity of the surveillance to differences between measured and predicted axial offset.
- (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 improving the F<sub>Q</sub> Technical Specification.
  - (ii) Westinghouse can sell support and defense of the improved F<sub>Q</sub> Technical Specification.
  - (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/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.

## Letter for Transmittal to the NRC

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

Enclosed are:

1. One (1) copy of WCAP-17661-P, Revision 1, "Improved RAOC and CAOC F<sub>Q</sub> Surveillance Technical Specifications" (Proprietary)
2. One (1) copy of WCAP-17661-NP, Revision 1, "Improved RAOC and CAOC F<sub>Q</sub> Surveillance Technical Specifications"(Non-Proprietary)

Also enclosed is the Westinghouse Application for Withholding Proprietary Information from Public Disclosure CAW-13-3853, accompanying Affidavit, Proprietary Information Notice, and Copyright Notice.

As Item 1 contains information proprietary to Westinghouse Electric Company LLC, 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 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 items listed above or the supporting Westinghouse Affidavit should reference CAW-13-3853 and should be addressed to James A. Gresham, Manager, Regulatory Compliance, Westinghouse Electric Company, Suite 310, 1000 Westinghouse Drive, Cranberry Township, Pennsylvania 16066.