



Program Management Office
1000 Westinghouse Drive
Cranberry Township, PA 16066

Project Number 694

July 17, 2015

OG-15-296

US Nuclear Regulatory Commission
Document Control Desk
11555 Rockville Pike
Rockville, MD 20852

Subject: PWR Owners Group
Submittal of WCAP-17788: "Comprehensive Analysis and Test Program for GSI-191 Closure (PA-SEE-1090)"

References:

1. OG-14-146, "Transmittal of WCAP-17788-NP Volume 2, "Comprehensive Analysis and Test Program for GSI-191 Closure (PA-SEE-1090) – Phenomena Identification and Ranking Table (PIRT) for GSI-191 Long-Term Cooling" (PA-SEE-1090), April 15, 2014
2. OG-15-1, "Transmittal of WCAP-17788-NP Volume 3, "Comprehensive Analysis and Test Program for GSI-191 Closure (PA-SEE-1090) – Cold Leg Break (CLB) Evaluation Method for GSI-191 Long-Term Cooling" (PA-SEE-1090), January 2, 2015
3. OG-15-273, "Transmittal of WCAP-17788, Volume 4: "Comprehensive Analysis and Test Program for GSI-191 Closure (PA-SEE-1090) – Thermal-Hydraulic Analysis of Large Hot Leg Break with Simulation of Core Inlet Blockage", July 2, 2105

Dear Mr. Rowley,

The purpose of this letter is to submit Pressurized Water Reactor Owner's Group (PWROG) WCAP-17788, "Comprehensive Analysis and Test Program for GSI-191 Closure (PA-SEE-1090)" in accordance with the Nuclear Regulatory Commission (NRC) TR program for review and acceptance for referencing in regulatory actions. The overall topical report consists of six volumes as described below:

- WCAP-17788-P, Volume 1, "Comprehensive Analysis and Test Program for GSI-191 Closure (PA-SEE-1090)"; transmitted via this letter.
- WCAP-17788-NP, Volume 2, "Comprehensive Analysis and Test Program for GSI-191 Closure (PA-SEE-1090) – Phenomena Identification and Ranking Table (PIRT) for GSI-191 Long-Term Cooling"; previously transmitted via Reference 1

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- WCAP-17788-NP, Volume 3, "Comprehensive Analysis and Test Program for GSI-191 Closure (PA-SEE-1090) – Cold Leg Break (CLB) Evaluation Method for GSI-191 Long-Term Cooling"; previously transmitted via Reference 2
- WCAP-17788-NP, Volume 4, "Comprehensive Analysis and Test Program for GSI-191 Closure (PA-SEE-1090) – Thermal-Hydraulic Analysis of Large Hot Leg Break with Simulation of Core Inlet Blockage"; previously transmitted via Reference 3
- WCAP-17788-P, Volume 5, "Comprehensive Analysis and Test Program for GSI-191 Closure (PA-SEE-1090) – Autoclave Chemical Effects Testing for GSI-191 Long-Term Cooling"; transmitted via this letter.
- WCAP-17788-P, Volume 6, "Comprehensive Analysis and Test Program for GSI-191 Closure (PA-SEE-1090) – Subscale Head Loss Test Program Report"; transmitted via this letter.

By this letter, the PWROG formally transmits all six volumes of WCAP 17788 to the NRC. The PWROG previously provided advance copies of Volumes 2, 3, and 4 to the NRC as cited in the list above for information purposes only. Since the topical report WCAP-17788 is now complete, the PWROG requests the NRC begin their formal review process. Please note a request for exemption from NRC Review fees for WCAP-17788 was previously sent via OG-15-63 and further clarified by OG-15-82; these letters are also enclosed.

Enclosed with this letter are fourteen enclosures:

1. Four (4) copies of WCAP-17788-P, Volume 1, "Comprehensive Analysis and Test Program for GSI-191 Closure (PA-SEE-1090)", (Proprietary)
2. One copy of the Application for Withholding, LTR-NRC-15-61 with the accompanying affidavit, Proprietary Information Notice and Copyright Notice for Enclosure 1, (Non-proprietary)
3. Four (4) copies of WCAP-17788-NP, Volume 1, "Comprehensive Analysis and Test Program for GSI-191 Closure (PA-SEE-1090)" (Non-proprietary)
4. Four (4) copies of WCAP-17788-NP Volume 2, "Comprehensive Analysis and Test Program for GSI-191 Closure (PA-SEE-1090) – Phenomena Identification and Ranking Table (PIRT) for GSI-191 Long-Term Cooling (PA-SEE-1090)" (Non-proprietary)
5. Four (4) copies of WCAP-17788-NP Volume 3, "Comprehensive Analysis and Test Program for GSI-191 Closure (PA-SEE-1090) – Cold Leg Break (CLB) Evaluation Method for GSI-191 Long-Term Cooling (PA-SEE-1090)", (Non-proprietary)
6. Four copies of WCAP-17788-P, Volume 4, "Comprehensive Analysis and Test Program for GSI-191 Closure (PA-SEE-1090) – Thermal-Hydraulic Analysis of Large Hot Leg Break with Simulation of Core Inlet Blockage" (Proprietary)
7. One copy of the Application for Withholding, LTR-NRC-15-57 with the accompanying affidavit, Proprietary Information Notice and Copyright Notice for Enclosure 6, (Non-proprietary)
8. Four copies of WCAP-17788-NP, Volume 4, "Comprehensive Analysis and Test Program for GSI-191 Closure (PA-SEE-1090) – Thermal-Hydraulic Analysis of Large Hot Leg Break with Simulation of Core Inlet Blockage" (Non-Proprietary)

9. Four (4) copies of WCAP-17788-P, Volume 5, "Comprehensive Analysis and Test Program for GSI-191 Closure (PA-SEE-1090) – Autoclave Chemical Effects Testing for GSI-191 Long-Term Cooling" (Proprietary)
10. One copy of the Application for Withholding, LTR-NRC-15-63 with the accompanying affidavit, Proprietary Information Notice and Copyright Notice for Enclosure 9, (Non-proprietary)
11. Four (4) copies of WCAP-17788-P, Volume 6, "Comprehensive Analysis and Test Program for GSI-191 Closure (PA-SEE-1090) – Subscale Head Loss Test Program Report" (Proprietary)
12. One copy of the Application for Withholding, LTR-NRC-15-64 with the accompanying affidavit, Proprietary Information Notice and Copyright Notice for Enclosure 11, (Non-proprietary)
13. One copy of OG-15-63, "Request for Exemption from NRC Fees to Review WCAP-17788-NP "Comprehensive Analysis and Test Program for GSI-191 Closure (PA-SEE-1090)," (Non-proprietary)
14. One copy of OG-15-82, "Transmittal of Additional Clarifications to OG-15-63, "Request for Exemption from NRC Fees to Review WCAP-17788-NP, "Comprehensive Analysis and Test Program for GSI-191 Closure", (Non-proprietary)

As Enclosures 1, 6, 9, and 11 contain information proprietary to Westinghouse Electric Company LLC, these are supported by Affidavits (2, 7, 10, and 12, respectively) 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. Additionally, the corresponding non-proprietary versions of enclosures 9 and 11 will be sent separately after completion.

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 LTR-NRC-15-61 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.

TR Classification: This TR presents the final results of a program to develop a deterministic approach and methodology for assessing the time-dependent collection of fibrous debris in the reactor vessel (RV) for member utilities. This assessment can then be used for final closure of Generic Letter 2004-02 and Generic Safety Issue (GSI) 191. NRC review and approval of WCAP-17788 will address a deterministic approach and method, via a generic licensing action; this will ensure the most efficient use of both NRC and licensee resources. Approval of the TR is not expected to require a change to the standard tech specs. As noted in Enclosure 13, the

purpose of this TR addresses the issues identified in Reference 3 and satisfies criterion 10 CFR 170.11(a)(1)(ii):

(ii) In response to an NRC request from the Associate Office Director level or above to resolve an identified safety, safeguards, or environmental issue, or to assist NRC in developing a rulemaking, regulatory guide, policy statement, generic letter, or bulletin

Specialized Resource Availability: This TR is being submitted to the NRC for review and approval so that the NRC approved version can be referenced in plant-specific GSI-191 Closeout submittals. NRC approval of the generic TR will reduce the impact on both licensee and NRC resources by eliminating the need for preparation of, and NRC review of, LARs associated with plant specific methodologies.

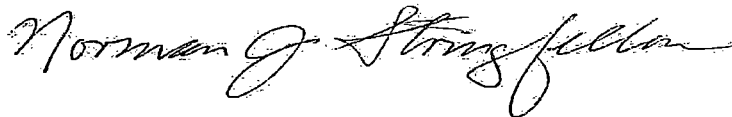
Applicability: This TR is applicable to all plant members of the PWROG who wish to utilize the methodology.

Correspondence related to this transmittal should be addressed to:

Mr. W. Anthony Nowinowski, Executive Director
PWR Owners Group, Program Management Office
Westinghouse Electric Company
1000 Westinghouse Drive
Cranberry Township, PA 16066

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

Sincerely,



Jack Stringfellow, Chairman
PWR Owners Group

NJS:jdb:rfr

Enclosures (14):

1. Four (4) copies of WCAP-17788-P, Volume 1, "Comprehensive Analysis and Test Program for GSI-191 Closure (PA-SEE-1090)", (Proprietary)
2. One copy of the Application for Withholding, LTR-NRC-15-61 with the accompanying affidavit, Proprietary Information Notice and Copyright Notice for Enclosure 1, (Non-proprietary)

3. Four (4) copies of WCAP-17788-NP, Volume 1, "Comprehensive Analysis and Test Program for GSI-191 Closure (PA-SEE-1090)" (Non-proprietary)
4. Four (4) copies of WCAP-17788-NP Volume 2, "Comprehensive Analysis and Test Program for GSI-191 Closure (PA-SEE-1090) – Phenomena Identification and Ranking Table (PIRT) for GSI-191 Long-Term Cooling (PA-SEE-1090)" (Non-proprietary)
5. Four (4) copies of WCAP-17788-NP Volume 3, "Comprehensive Analysis and Test Program for GSI-191 Closure (PA-SEE-1090) – Cold Leg Break (CLB) Evaluation Method for GSI-191 Long-Term Cooling (PA-SEE-1090)", (Non-proprietary)
6. Four copies of WCAP-17788-P, Volume 4, "Comprehensive Analysis and Test Program for GSI-191 Closure (PA-SEE-1090) – Thermal-Hydraulic Analysis of Large Hot Leg Break with Simulation of Core Inlet Blockage" (Proprietary)
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8. Four copies of WCAP-17788-NP, Volume 4, "Comprehensive Analysis and Test Program for GSI-191 Closure (PA-SEE-1090) – Thermal-Hydraulic Analysis of Large Hot Leg Break with Simulation of Core Inlet Blockage" (Non-Proprietary)
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10. One copy of the Application for Withholding, LTR-NRC-15-63 with the accompanying affidavit, Proprietary Information Notice and Copyright Notice for Enclosure 9, (Non-proprietary)
11. Four (4) copies of WCAP-17788-P, Volume 6, "Comprehensive Analysis and Test Program for GSI-191 Closure (PA-SEE-1090) – Subscale Head Loss Test Program Report" (Proprietary)
12. One copy of the Application for Withholding, LTR-NRC-15-64 with the accompanying affidavit, Proprietary Information Notice and Copyright Notice for Enclosure 11, (Non-proprietary)
13. One copy of OG-15-63, "Request for Exemption from NRC Fees to Review WCAP-17788-NP "Comprehensive Analysis and Test Program for GSI-191 Closure (PA-SEE-1090)," (Non-proprietary)
14. One copy of OG-15-82, "Transmittal of Additional Clarifications to OG-15-63, "Request for Exemption from NRC Fees to Review WCAP-17788-NP, "Comprehensive Analysis and Test Program for GSI-191 Closure", (Non-proprietary)

cc: PWROG Management Committee
PWROG SEE Subcommittee
PWROG Licensing Subcommittee
PWROG PMO

J. D. Andrachek – Westinghouse
J. A. Gresham – Westinghouse
T. S. Andreychek – Westinghouse
M. Cerrone – Westinghouse
T. Croyle – Westinghouse
J. Maruschak - Westinghouse
R. Schomaker – AREVA NP
A. Spontarelli – AREVA NP
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LTR-NRC-15-61

July 10, 2015

Subject: Submittal of WCAP-17788-P/-NP, Volume 1, Revision 0, "Comprehensive Analysis and Test Program for GSI-191 Closure (PA-SEE-1090)" (Proprietary/Non-Proprietary)

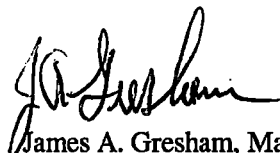
Enclosed are the proprietary and non-proprietary versions of WCAP-17788, Volume 1, Revision 0, "Comprehensive Analysis and Test Program for GSI-191 Closure (PA-SEE-1090)," dated July 2015, submitted for review and approval under the NRC's licensing topical report program for referencing in licensing actions.

Also enclosed are:

1. An Application for Withholding Proprietary Information from Public Disclosure, AW-15-4221 (Non-Proprietary) with Proprietary Information Notice and Copyright Notice
2. An 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 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.

Correspondence with respect to the proprietary aspects of the Application for Withholding or the Westinghouse Affidavit should reference AW-15-4221 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.


James A. Gresham, Manager
Regulatory Compliance

Enclosures

bcc: James A. Gresham
Cheryl Robinson
Anne M. Stegman



Westinghouse Electric Company
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USA

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AW-15-4221

July 10, 2015

**APPLICATION FOR WITHHOLDING PROPRIETARY
INFORMATION FROM PUBLIC DISCLOSURE**

Subject: WCAP-17788-P, Volume 1, Revision 0, "Comprehensive Analysis and Test Program for GSI-191 Closure (PA-SEE-1090)" (Proprietary)

Reference: Letter from James A. Gresham to Document Control Desk, LTR-NRC-15-61, dated July 10, 2015

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 is identified in the proprietary version of the subject report. In conformance with 10 CFR Section 2.390, Affidavit AW-15-4221 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 the proprietary aspects of this Application for Withholding or the accompanying Affidavit should reference AW-15-4221 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

AW-15-4221

July 10, 2015

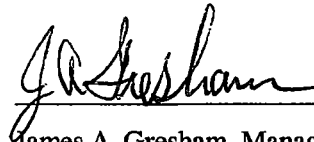
AFFIDAVIT

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 I declare under penalty of perjury that the foregoing is true and correct.

A handwritten signature in cursive script, appearing to read "J A Gresham", is written over a horizontal line.

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, 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-17788-P, Volume 1, Revision 0, "Comprehensive Analysis and Test Program for GSI-191 Closure (PA-SEE-1090)" (Proprietary), dated July 2015, for submittal to the Commission, being transmitted by Westinghouse letter, LTR-NRC-15-61, 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-17788-P, Volume 1, Revision 0 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-17788-P, Volume 1, Revision 0, "Comprehensive Analysis and Test Program for GSI-191 Closure (PA-SEE-1090)."

- (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 providing information that can be used to gain margin in terms of allowable fiber loads at the core inlet in a post-LOCA scenario.
 - (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 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.



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LTR-NRC-15-57

July 1, 2015

Subject: Submittal of WCAP-17788-P/-NP, Volume 4, Revision 0, "Comprehensive Analysis and Test Program for GSI-191 Closure (PA-SEE-1090) – Thermal-Hydraulic Analysis of Large Hot Leg Break with Simulation of Core Inlet Blockage" (Proprietary/Non-Proprietary)

Enclosed are the proprietary and non-proprietary versions of WCAP-17788, Volume 4, Revision 0, "Comprehensive Analysis and Test Program for GSI-191 Closure (PA-SEE-1090) – Thermal-Hydraulic Analysis of Large Hot Leg Break with Simulation of Core Inlet Blockage," dated July 2015, submitted for review and approval under the NRC's licensing topical report program for referencing in licensing actions.

Also enclosed are:

1. An Application for Withholding Proprietary Information from Public Disclosure, AW-15-4220 (Non-Proprietary) with Proprietary Information Notice and Copyright Notice
2. An 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 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.

Correspondence with respect to the proprietary aspects of the Application for Withholding or the Westinghouse Affidavit should reference AW-15-4220 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 "W.A. Gresham / FOR".

James A. Gresham, Manager
Regulatory Compliance

Enclosures

bcc: James A. Gresham
Cheryl Robinson
Anne M. Stegman



Westinghouse

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

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11555 Rockville Pike
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AW-15-4220

July 1, 2015

**APPLICATION FOR WITHHOLDING PROPRIETARY
INFORMATION FROM PUBLIC DISCLOSURE**

Subject: WCAP-17788-P, Volume 4, Revision 0, "Comprehensive Analysis and Test Program for GSI-191 Closure (PA-SEE-1090) – Thermal-Hydraulic Analysis of Large Hot Leg Break with Simulation of Core Inlet Blockage" (Proprietary)

Reference: Letter from James A. Gresham to Document Control Desk, LTR-NRC-15-57, dated July 1, 2015

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 is identified in the proprietary version of the subject report. In conformance with 10 CFR Section 2.390, Affidavit AW-15-4220 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 the proprietary aspects of this Application for Withholding or the accompanying Affidavit should reference AW-15-4220 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.

W. A. Gresham / FOR

James A. Gresham, Manager
Regulatory Compliance

AW-15-4220

July 1, 2015

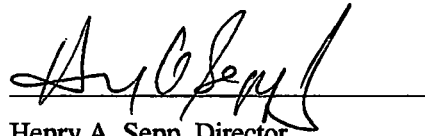
AFFIDAVIT

COMMONWEALTH OF PENNSYLVANIA:

ss

COUNTY OF BUTLER:

I, Henry A. Sepp, am authorized to execute this Affidavit on behalf of Westinghouse Electric Company LLC (Westinghouse), and I declare under penalty of perjury that the foregoing is true and correct.

A handwritten signature in black ink, appearing to read "H. A. Sepp", is written over a horizontal line.

Henry A. Sepp, Director

CRE-Systems and Components Engineering

- (1) I am Director, CRE-Systems and Components Engineering, 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, 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-17788-P, Volume 4, Revision 0, "Comprehensive Analysis and Test Program for GSI-191 Closure (PA-SEE-1090) – Thermal-Hydraulic Analysis of Large Hot Leg Break with Simulation of Core Inlet Blockage" (Proprietary), dated July 2015, for submittal to the Commission, being transmitted by Westinghouse letter, LTR-NRC-15-57, 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-17788-P, Volume 4, Revision 0 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-17788, Volume 4, Revision 0, "Comprehensive Analysis and Test Program for GSI-191 Closure (PA-SEE-1090) – Thermal-Hydraulic Analysis of Large Hot Leg Break with Simulation of Core Inlet Blockage."
- (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 providing information that can be used to gain margin in terms of allowable fiber loads at the core inlet in a post-LOCA scenario.
 - (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 the 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.



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

LTR-NRC-15-63

July 16, 2016

Subject: Submittal of WCAP-17788-P, Volume 5, Revision 0, "Comprehensive Analysis and Test Program for GSI-191 Closure (PA-SEE-1090) – Autoclave Chemical Effects Testing for GSI-191 Long-Term Cooling" (Proprietary)

Enclosed is the proprietary version of WCAP-17788-P, Volume 5, Revision 0, "Comprehensive Analysis and Test Program for GSI-191 Closure (PA-SEE-1090) – Autoclave Chemical Effects Testing for GSI-191 Long-Term Cooling" dated July 2015," submitted for review and approval under the NRC's licensing topical report program for referencing in licensing actions.

Also enclosed are:

1. An Application for Withholding Proprietary Information from Public Disclosure, AW-15-4222 (Non-Proprietary) with Proprietary Information Notice and Copyright Notice
2. An 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 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.

Correspondence with respect to the proprietary aspects of the Application for Withholding or the Westinghouse Affidavit should reference AW-15-4222 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 cursive script, appearing to read 'ja Gresham', is positioned above the printed name and title.
James A. Gresham, Manager
Regulatory Compliance

Enclosures

bcc: James A. Gresham
Cheryl Robinson
Anne M. Stegman



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

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

AW-15-4222

July 16, 2015

**APPLICATION FOR WITHHOLDING PROPRIETARY
INFORMATION FROM PUBLIC DISCLOSURE**

Subject: WCAP-17788-P, Volume 5, Revision 0, "Comprehensive Analysis and Test Program for GSI-191 Closure (PA-SEE-1090) – Autoclave Chemical Effects Testing for GSI-191 Long-Term Cooling" (Proprietary)

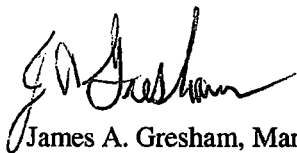
Reference: Letter from James A. Gresham to Document Control Desk, LTR-NRC-15-63, dated July 16, 2015

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 is identified in the proprietary version of the subject report. In conformance with 10 CFR Section 2.390, Affidavit AW-15-4222 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 the proprietary aspects of this Application for Withholding or the accompanying Affidavit should reference AW-15-4222 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.


James A. Gresham, Manager
Regulatory Compliance

AW-15-4222

July 16, 2015

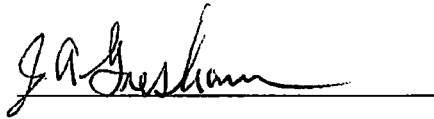
AFFIDAVIT

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 I declare under penalty of perjury that the foregoing is true and correct.

A handwritten signature in cursive script, appearing to read "JA Gresham", is written over a horizontal line.

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, 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-17788-P, Volume 5, Revision 0, "Comprehensive Analysis and Test Program for GSI-191 Closure (PA-SEE-1090) – Autoclave Chemical Effects Testing for GSI-191 Long-Term Cooling" (Proprietary), dated July 2015, for submittal to the Commission, being transmitted by Westinghouse letter, LTR-NRC-15-63, 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-17788-P, Volume 5, Revision 0 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-17788-P, Volume 5, Revision 0, "Comprehensive Analysis and Test Program for GSI-191 Closure (PA-SEE-1090) – Autoclave Chemical Effects Testing for GSI-191 Long-Term Cooling."
- (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 providing information that can be used to gain margin in terms of allowable fiber loads at the core inlet in a post-LOCA scenario.
 - (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 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).

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Westinghouse

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LTR-NRC-15-64

July 16, 2015

Subject: Submittal of WCAP-17788-P, Volume 6, Revision 0, "Comprehensive Analysis and Test Program for GSI-191 Closure (PA-SEE-1090) – Subscale Head Loss Test Program Report" (Proprietary).

Enclosed is the proprietary version of WCAP-17788-P, Volume 6, Revision 0, "Comprehensive Analysis and Test Program for GSI-191 Closure (PA-SEE-1090) – Subscale Head Loss Test Program Report" dated July 2015," submitted for review and approval under the NRC's licensing topical report program for referencing in licensing actions.

Also enclosed are:

1. An Application for Withholding Proprietary Information from Public Disclosure, AW-15-4223 (Non-Proprietary) with Proprietary Information Notice and Copyright Notice
2. An 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 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.

Correspondence with respect to the proprietary aspects of the Application for Withholding or the Westinghouse Affidavit should reference AW-15-4223 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.

James A. Gresham, Manager
Regulatory Compliance

Enclosures

bcc: James A. Gresham
Cheryl Robinson
Anne M. Stegman



Westinghouse

Westinghouse Electric Company
1000 Westinghouse Drive
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AW-15-4223

July 16, 2015

**APPLICATION FOR WITHHOLDING PROPRIETARY
INFORMATION FROM PUBLIC DISCLOSURE**

Subject: WCAP-17788-P, Volume 6, Revision 0, "Comprehensive Analysis and Test Program for GSI-191 Closure (PA-SEE-1090) – Subscale Head Loss Test Program Report" (Proprietary)

Reference: Letter from James A. Gresham to Document Control Desk, LTR-NRC-15-64, dated July 16, 2015

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 is identified in the proprietary version of the subject report. In conformance with 10 CFR Section 2.390, Affidavit AW-15-4223 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 the proprietary aspects of this Application for Withholding or the accompanying Affidavit should reference AW-15-4223 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.

James A. Gresham, Manager
Regulatory Compliance

AW-15-4223

July 16, 2015

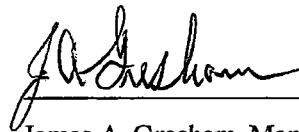
AFFIDAVIT

COMMONWEALTH OF PENNSYLVANIA:

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I, James A. Gresham, am authorized to execute this Affidavit on behalf of Westinghouse Electric Company LLC (Westinghouse), and I declare under penalty of perjury that the foregoing is true and correct.

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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.
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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-17788-P, Volume 6, Revision 0, "Comprehensive Analysis and Test Program for GSI-191 Closure (PA-SEE-1090) – Subscale Head Loss Test Program Report" (Proprietary), dated July 2015, for submittal to the Commission, being transmitted by Westinghouse letter, LTR-NRC-15-64, 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-17788-P, Volume 6, Revision 0 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-17788-P, Volume 6, Revision 0, "Comprehensive Analysis and Test Program for GSI-191 Closure (PA-SEE-1090) – Subscale Head Loss Test Program Report."

- (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 providing information that can be used to gain margin in terms of allowable fiber loads at the core inlet in a post-LOCA scenario.
 - (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 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).

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Program Management Office
1000 Westinghouse Drive
Cranberry Township, Pennsylvania 16066

WCAP-17788-NP, Revision 0
Project Number 694

February 13, 2015

OG-15-63

Maureen Wylie
Chief Financial Officer
U. S. Nuclear Regulatory Commission
Washington, DC 20555-0001

Subject: PWR Owners Group
Request for Exemption from NRC Fees to Review WCAP-17788-NP
"Comprehensive Analysis and Test Program for GSI-191 Closure (PA-SEE-1090)."

References:

1. OG-14-146, "Transmittal of WCAP-17788-NP Volume 2, "Comprehensive Analysis and Test Program for GSI-191 Closure (PA-SEE-1090) – Phenomena Identification and Ranking Table (PIRT) for GSI-191 Long-Term Cooling" (PA-SEE-1090)" April, 2014.
2. Generic Safety Issue, GSI-191, "Potential of PWR Sump Blockage Post-LOCA," 1998.
3. Nuclear Regulatory Commission Generic Letter GL 2004-02, "Potential Impact of Debris Blockage on Emergency Recirculation during Design Basis Accidents at Pressurized Water Reactors," September 2004.
4. SECY 12-0093, "Closure Options for Generic Safety Issue -191, Assessment of Debris Accumulation on Pressurized-Water Reactor Sump Performance," July 2012.
5. OG-15-1, "Transmittal of WCAP-17788-NP Volume 3, "Comprehensive Analysis and Test Program for GSI-191 Closure (PA-SEE-1090) - Cold Leg Break (CLB) Evaluation Method for GSI-191 Long-Term Cooling" (PA-SEE-1090)" January 2015.

Dear Ms. Wylie:

The Pressurized Water Reactor Owner's Group (PWROG) is requesting an exemption from NRC fees to review WCAP-17788-NP "Comprehensive Analysis and Test Program for GSI-191 Closure". The final WCAP is currently projected to be completed in the second quarter of 2015. The NRC identified a concern regarding maintaining adequate long-term core cooling following a LOCA in GSI-191 (Reference 2). Generic Letter (GL) 2004-02 (Reference 3) identified actions that utilities must take to address the sump blockage issue. The NRC requires

confirmation that debris transported to the containment sump screen after a LOCA will not lead to unacceptable head loss for the recirculation pumps, will not impede flow through the emergency core cooling system (ECCS) and containment spray system (CSS), and will not adversely affect the long-term operation of either the ECCS or the CSS.

This Topical Report (TR) provides a method of addressing the issues that are identified in both References 2 and 3. The TR will utilize a deterministic model to address GSI-191 concerns in accordance with Option 2a of Reference 4. Generic approval of WCAP-17788-NP will provide an approved methodology for numerous plants to utilize to close the GSI-191 issue. Based on recent projections, approximately 30 units plan to follow the methodology submitted in WCAP-17788-NP. NRC approval of this generic methodology will significantly reduce the impact on both licensee and NRC resources by eliminating the need for the development of plant specific methodologies, and NRC review of these plant specific methodologies.

Additionally, a number of meetings between the NRC Staff and the PWROG have been held to date (including but not limited to those that were held on April 1, 2014 {ML14077A547} and April 16, 2014 {ML14092A410}). It is anticipated that additional meetings will be held in the future to discuss the methodology in the TR with the goal of obtaining NRC feedback until WCAP-17788-NP is submitted for NRC review and approval. For example, the NRC is planning to witness program hydraulic testing at the Westinghouse Churchill site on February 26-27, 2015. It is expected that this visit and similar visits would also be covered by this request as it will facilitate a more streamlined review of the TR.

It is requested that the review fees associated with the review of WCAP-17788-NP be exempted from NRC fees including reimbursement of any fees associated with MF3408, "Eval. Of Long-Term Cooling Considering Particulate Fibrous and Chemical Debris Above 15 grams". It is also requested that any future meetings, audits and witness of testing associated with the review of the WCAP also be exempted from NRC fees. Additionally, the staff informally requested advance copies of WCAP Volumes during the April 1, 2014 NRC Meeting (ML14077A547); Volume 2 and Volume 3 of the WCAP have been made available to the NRC (Reference 1 and 5). Future Volumes of the WCAP will be provided as they are completed, consistent with the NRC's request during the April 1, 2014 meeting. A review fee waiver for any meetings, advance reviews, and the final NRC review of WCAP- 17788-NP is requested pursuant to the provisions of 10 CFR 170.11 since the purpose of this TR addresses the issues identified in Reference 3 and satisfies criterion 10 CFR 170.11(a)(1)(ii):

(ii) In response to an NRC request from the Associate Office Director level or above to resolve an identified safety, safeguards, or environmental issue, or to assist NRC in developing a rulemaking, regulatory guide, policy statement, generic letter, or bulletin

Thank you in advance for consideration of our request for exemption from NRC review fees associated with WCAP-17788-NP.

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,

A handwritten signature in cursive script that reads "Norman J. Stringfellow".

Jack Stringfellow, Chief Operating Officer and Chairman
PWR Owners Group

JDB:NJS:rfn

cc:

PWROG Licensing Committee
PWROG Steering Committee
PWROG SEE Committee
PWROG PMO
J. Gresham, Westinghouse
J. Andrachek, Westinghouse
D. Olinski, Westinghouse
T. Croyle, Westinghouse
J. Maruschak, Westinghouse
J. Rowley, US NRC
V. Cusumano, NRC



Program Management Office
1000 Westinghouse Drive
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WCAP-17788-NP, Revision 0
Project Number 694

February 27, 2015

OG-15-82

Maureen Wylie
Chief Financial Officer
U. S. Nuclear Regulatory Commission
Washington, DC 20555-0001

Subject: PWR Owners Group
Transmittal of Additional Clarifications to OG-15-63, "Request for Exemption from NRC Fees to Review WCAP-17788-NP, "Comprehensive Analysis and Test Program for GSI-191 Closure", (PA-SEE-1090)"

References:

1. OG-14-146, "Transmittal of WCAP-17788-NP Volume 2, "Comprehensive Analysis and Test Program for GSI-191 Closure (PA-SEE-1090) – Phenomena Identification and Ranking Table (PIRT) for GSI-191 Long-Term Cooling" (PA-SEE-1090)," April 15, 2014.
2. Generic Safety Issue, GSI-191, "Potential of PWR Sump Blockage Post-LOCA," 1998.
3. Nuclear Regulatory Commission Generic Letter GL 2004-02, "Potential Impact of Debris Blockage on Emergency Recirculation during Design Basis Accidents at Pressurized Water Reactors," September 13, 2004.
4. SECY 12-0093, "Closure Options for Generic Safety Issue -191, Assessment of Debris Accumulation on Pressurized-Water Reactor Sump Performance," July 2012.
5. OG-15-1, "Transmittal of WCAP-17788-NP Volume 3, "Comprehensive Analysis and Test Program for GSI-191 Closure (PA-SEE-1090) - Cold Leg Break (CLB) Evaluation Method for GSI-191 Long-Term Cooling" (PA-SEE-1090)" January 2, 2015.
6. OG-15-63, "Request for Exemption from NRC Fees to Review WCAP-17788-NP "Comprehensive Analysis and Test Program for GSI-191 Closure (PA-SEE-1090)," February 13, 2015.

Dear Ms. Wylie:

The Pressurized Water Reactor Owner's Group (PWROG) requested an exemption from NRC fees for the review of WCAP-17788-NP "Comprehensive Analysis and Test Program for GSI-191 Closure" in OG-15-63 (Reference 6). The purpose of this letter is to transmit additional

clarifying information to support the PWROG request for fee waiver exemption that was transmitted by Reference 6.

This letter clarifies how 10 CFR 170.11(a)(1)(ii) and 10 CFR 170.11(B) are met.

As stated in OG-15-63, the purpose of this WCAP is to specifically address the issues identified in References 2 and 3 and satisfies 10 CFR 170.11(a)(1)(ii), which is stated below:

(ii) In response to an NRC request from the Associate Office Director level or above to resolve an identified safety, safeguards, or environmental issue, or to assist NRC in developing a rulemaking, regulatory guide, policy statement, generic letter, or bulletin;

The NRC identified a concern regarding maintaining adequate long-term core cooling following a LOCA in GSI-191 (Reference 2). Generic Letter (GL) 2004-02 (Reference 3) identified actions that utilities must take to address the sump blockage issue. Reference 4 was issued by the NRC to provide the industry options to close out the GSI-191 issue. The Topical Report (TR) being submitted by the PWROG provides a direct method of addressing the issues that are identified in both References 2 and 3 and follows the deterministic model to resolve GSI-191 concerns in accordance with Option 2a of Reference 4.

Therefore, based on the discussion above, this WCAP meets the "safety," criterion in 10 CFR 170.11(a)(1)(ii).

This WCAP also satisfies 10 CFR 170.11(B), which is stated below:

(B) The NRC must be the primary beneficiary of the NRC's review and approval of these documents.

Generic approval of WCAP-17788-NP will provide an approved methodology for numerous plants to utilize to close the GSI-191 issue. Based on recent projections, approximately 30 units plan to follow the methodology submitted in WCAP-17788-NP. NRC approval of this generic methodology will significantly reduce the impact on NRC resources by eliminating the need for the development of plant specific methodologies, and NRC review of these plant specific methodologies.

Therefore, based on the discussion above, this WCAP meets the criterion in 10 CFR 170.11(B) that the NRC is the primary beneficiary of the NRC's review and approval of the WCAP.

In addition to the request for exemption from the review fees associated with the review of WCAP-17788-NP, the PWROG also requests that the NRC review fees associated with TAC #MF2745, "PWROG Letters Concerning Boric Acid Precipitation" and TAC #MF1940, "PWROG Letters Concerning Boric Acid Precipitation," be exempted and reimbursed. The review of these letters supports the review of WCAP-17788-NP.

Thank you in advance for consideration of our request for exemption from NRC review fees associated with WCAP-17788-NP.

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

JDB:NJS:rfn

cc:

- PWROG Licensing Committee
- PWROG Steering Committee
- PWROG SEE Committee
- PWROG PMO
- J. Gresham, Westinghouse
- J. Andrachek, Westinghouse
- D. Olinski, Westinghouse
- T. Croyle, Westinghouse
- J. Maruschak, Westinghouse
- J. Rowley, US NRC
- V. Cusumano, NRC