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Your ref: Docket No. 52-006
Our ref: DCP_NRC_003178

June 14, 2011

Subject: Transmittal of Technical Report APP-GW-GLR-096, Revision 3 (Proprietary) and APP-GW-GLR-097, Revision 3 (Non-Proprietary) "Evaluation of the Effect of the AP1000® Enhanced Shield Building Design on the Containment Response and Safety Analyses"

Westinghouse is submitting Revision 3 of APP-GW-GLR-096 (Proprietary), "Evaluation of the Effect of the AP1000 Enhanced Shield Building Design on the Containment Response and Safety Analyses," and the associated Non-Proprietary version (APP-GW-GLR-097) in support of the AP1000 Design Certification Amendment Application (Docket No. 52-006). The information in the enclosures to this letter supersedes the information in the letter that transmitted Revision 2 of APP-GW-GLR-096. The information provided in this report is generic and is expected to apply to all Combined Operating License (COL) applicants referencing the AP1000 Design Certification and the AP1000 Design Certification Amendment Application.

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 one copy of the Application for Withholding, AW-11-3161 (non-proprietary, Enclosure 1), and one copy of the associated Affidavit (non-proprietary, Enclosure 2) with Proprietary Information and Copyright Notices. The affidavit sets forth the basis on which the information identified as proprietary may be withheld from public disclosure by the Commission. Pursuant to 10 CFR 50.30(b), APP-GW-GLR-096, Rev. 3 (Proprietary) and APP-GW-GLR-097, Rev. 3 (Non-proprietary) are submitted as Enclosures 3 and 4. Enclosure 3 contains sensitive unclassified non-safeguards information (SUNSI) relative to the physical protection of an AP1000 Nuclear Plant that should be withheld from public disclosure pursuant to 10 CFR 2.390(d). Correspondence with respect to the affidavit or Application for Withholding should include our reference number AW-11-3161 and should be addressed to James A. Gresham, Manager, Regulatory Compliance and Plant Licensing, Westinghouse Electric Company, LLC, 1000 Westinghouse Drive, Cranberry Township, Pennsylvania 16066.

The enclosed report is revised to summarize the updates to the LOCA mass and energy calculation and containment response calculation to address items that affect the calculated peak containment pressure reported in the Technical Specifications. The specific items addressed are identified in Section 1.1 and 7.2 of APP-GW-GLR-096, Rev. 3. The impact of these changes on containment peak pressure is documented in Section 8.0 of APP-GW-GLR-096, Rev. 3 and in the draft DCD Rev. 19 markups documented in Appendix B of APP-GW-GLR-096. A compressed version of the report in Enclosure 3 was transmitted by email on June 13, 2011.

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Additional heat sinks within containment are credited in the updated peak pressure calculation (Table 6.2.1.1-10 in Appendix B of APP-GW-GLR-096). The new heat sink information provided in Table 6.2.1.1-10 is classified as Tier 2* information that does not expire at first full power. The criteria of Standard Review Plan (SRP) Section 14.3 and ITAAC requirements in DCD Section 14.3 were used to determine whether the new heat sink information should be included as Tier 1 information.

Westinghouse evaluation of the Tier 1 criteria concluded that the newly credited heat sinks are not top level design features that pertain to the safety of the plant (the criteria in DCD Subsection 14.3.2.1), and thus, including these as ITAAC would not be consistent with previous ITAAC development for the AP1000. The basis for not meeting any of these criteria is that the newly credited heat sinks provide only a minor contribution to heat removal and pressure reduction for a design basis event. For example:

- The amount of metal mass in containment that is credited as a heat sink has been increased by approximately 15% in the updated peak pressure calculation (APP-GW-GLR-096, Rev. 3). This does not include the containment vessel shell, which is the biggest heat sink in the containment evaluation model and is responsible for a significant portion of heat removal during a LOCA or MSLB.
- The containment evaluation model conservatively does not credit all existing steel structures in containment in the peak internal pressure evaluation. Approximately 0.5 million pounds of carbon steel exists in the containment evaluation model that is currently not being credited as a heat sink.
- The newly credited heat sinks contribute to heat removal and pressure reduction from a design basis event, but their contribution is minor in comparison to existing design features, namely the passive containment cooling system, and structures credited for heat removal, such as the containment vessel shell.
- At the time of peak pressure, the newly credited heat sinks contribute less than 1.0 psig in pressure reduction.
- The containment vessel design pressure has inherent margin, because the capacity of the containment vessel structure is actually much greater than the design pressure limit.

For these reasons, it is Westinghouse's position that the presentation of the new heat sink data, in the form of minimum surface area and volume requirements in identified containment subcompartments, as Tier 2* information provides sufficient regulatory control and is an appropriate licensing basis.

Appendix A of APP-GW-GLR-096, Rev. 3 contains DCD markups that were incorporated into Rev. 18 of the DCD. Appendix B of APP-GW-GLR-096, Rev. 3 contains draft DCD markups for Revision 19. The final DCD markups for Revision 19 associated with this report were transmitted to the NRC in Westinghouse letter number DCP_NRC_003171, dated June 12, 2011.

Questions or requests for additional information related to the content and preparation of this report should be directed to Westinghouse. Please send copies of such questions or requests to the prospective applicants for combined licenses referencing the AP1000 Design Certification. A representative for each applicant is included on the cc: list of this letter.

Very truly yours,



R. F. Ziesing
Director, U.S. Licensing

/Enclosures

1. AW-11-3161 "Application for Withholding Proprietary Information from Disclosure," dated June 14, 2011
2. AW-11-3161, Affidavit, Proprietary Information Notice, Copyright Notice dated June 14, 2011
3. APP-GW-GLR-096, Revision 3 (Proprietary) "Evaluation of the Effect of the AP1000 Enhanced Shield Building Design on the Containment Response and Safety Analyses"
4. APP-GW-GLR-097, Revision 3 (Non-Proprietary) "Evaluation of the Effect of the AP1000 Enhanced Shield Building Design on the Containment Response and Safety Analyses"

cc: P. Buckberg - U.S. NRC
E. McKenna - U.S. NRC
T. Spink - TVA
P. Hastings - Duke Energy
R. Kitchen - Progress Energy
A. Monroe - SCANA
P. Jacobs - Florida Power & Light
C. Pierce - Southern Company
E. Schmiech - Westinghouse
S. Ritterbusch - Westinghouse
G. Zinke - NuStart/Entergy
R. Grumbir - NuStart

ENCLOSURE 1

AW-11-3161

APPLICATION FOR WITHHOLDING
PROPRIETARY INFORMATION FROM DISCLOSURE



Westinghouse Electric Company
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Your ref: Docket No. 52-006
Our ref: AW-11-3161

June 14, 2011

APPLICATION FOR WITHHOLDING PROPRIETARY
INFORMATION FROM PUBLIC DISCLOSURE

Subject: Transmittal of Technical Report APP-GW-GLR-096 Revision 3, (Proprietary) and APP-GW-GLR-097 Revision 3 (Non-Proprietary) "Evaluation of the Effect of the AP1000 Enhanced Shield Building Design on the Containment Response and Safety Analyses"

The Application for Withholding 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 is customarily held in confidence.

The proprietary material for which withholding is being requested is identified in the proprietary version of the subject report. In conformance with 10 CFR Section 2.390, Affidavit AW-11-3161 accompanies this Application for Withholding, setting forth the basis on which the identified proprietary information may be withheld from public disclosure.

Accordingly, it is respectfully requested that the subject information which is proprietary to Westinghouse be withheld from public disclosure in accordance with 10 CFR Section 2.390 of the Commission's regulations.

Correspondence with respect to this Application for Withholding or the accompanying affidavit should reference AW-11-3161 and should be addressed to James A. Gresham, Manager, Regulatory Compliance and Plant Licensing, Westinghouse Electric Company LLC, 1000 Westinghouse Drive, Cranberry Township, Pennsylvania, 16066.

Very truly yours,

A handwritten signature in black ink, appearing to read "R. B. Sisk".

R. B. Sisk
Manager, International Licensing

AW-11-3161
June 14, 2011

ENCLOSURE 2

AFFIDAVIT

AFFIDAVIT

COMMONWEALTH OF PENNSYLVANIA:

SS

COUNTY OF BUTLER:

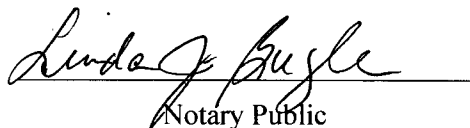
Before me, the undersigned authority, personally appeared R. B. Sisk, who, being by me duly sworn according to law, deposes and says that he is authorized to execute this Affidavit on behalf of Westinghouse Electric Company LLC (Westinghouse), and that the averments of fact set forth in this Affidavit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



R. B. Sisk
Manager, International Licensing

Sworn to and subscribed
before me this 14th day
of June 2011.

COMMONWEALTH OF PENNSYLVANIA
Notarial Seal
Linda J. Bugle, Notary Public
City of Pittsburgh, Allegheny County
My Commission Expires June 18, 2013
Member, Pennsylvania Association of Notaries


Notary Public

- (1) I am Manager, International Licensing, 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" accompanying this Affidavit.
- (3) I have personal knowledge of the criteria and procedures utilized by Westinghouse in designating information as a trade secret, privileged or as confidential commercial or financial information.
- (4) Pursuant to the provisions of paragraph (b)(4) of Section 2.390 of the Commission's regulations, the following is furnished for consideration by the Commission in determining whether the information sought to be withheld from public disclosure should be withheld.
 - (i) The information sought to be withheld from public disclosure is owned and has been held in confidence by Westinghouse.
 - (ii) The information is of a type customarily held in confidence by Westinghouse and not customarily disclosed to the public. Westinghouse has a rational basis for determining the types of information customarily held in confidence by it and, in that connection, utilizes a system to determine when and whether to hold certain types of information in confidence. The application of that system and the substance of that system constitutes Westinghouse policy and provides the rational basis required.

Under that system, information is held in confidence if it falls in one or more of several types, the release of which might result in the loss of an existing or potential competitive advantage, as follows:

- (a) The information reveals the distinguishing aspects of a process (or component, structure, tool, method, etc.) where prevention of its use by any of

Westinghouse's competitors without license from Westinghouse constitutes a competitive economic advantage over other companies.

- (b) It consists of supporting data, including test data, relative to a process (or component, structure, tool, method, etc.), the application of which data secures a competitive economic advantage, e.g., by optimization or improved marketability.
- (c) Its use by a competitor would reduce his expenditure of resources or improve his competitive position in the design, manufacture, shipment, installation, assurance of quality, or licensing a similar product.
- (d) It reveals cost or price information, production capacities, budget levels, or commercial strategies of Westinghouse, its customers or suppliers.
- (e) It reveals aspects of past, present, or future Westinghouse or customer funded development plans and programs of potential commercial value to Westinghouse.
- (f) It contains patentable ideas, for which patent protection may be desirable.

There are sound policy reasons behind the Westinghouse system which include the following:

- (a) The use of such information by Westinghouse gives Westinghouse a competitive advantage over its competitors. It is, therefore, withheld from disclosure to protect the Westinghouse competitive position.
- (b) It is information that is marketable in many ways. The extent to which such information is available to competitors diminishes the Westinghouse ability to sell products and services involving the use of the information.
- (c) Use by our competitor would put Westinghouse at a competitive disadvantage by reducing his expenditure of resources at our expense.

- (d) Each component of proprietary information pertinent to a particular competitive advantage is potentially as valuable as the total competitive advantage. If competitors acquire components of proprietary information, any one component may be the key to the entire puzzle, thereby depriving Westinghouse of a competitive advantage.
 - (e) Unrestricted disclosure would jeopardize the position of prominence of Westinghouse in the world market, and thereby give a market advantage to the competition of those countries.
 - (f) The Westinghouse capacity to invest corporate assets in research and development depends upon the success in obtaining and maintaining a competitive advantage.
- (iii) The information is being transmitted to the Commission in confidence and, under the provisions of 10 CFR Section 2.390, it is to be received in confidence by the Commission.
- (iv) The information sought to be protected is not available in public sources or available information has not been previously employed in the same original manner or method to the best of our knowledge and belief.
- (v) The proprietary information sought to be withheld in this submittal is that which is appropriately marked in attachment to DCP_NRC_003178, Transmittal of Technical Report APP-GW-GLR-096 Revision 3, (Proprietary) and APP-GW-GLR-097 Revision 3 (Non-Proprietary) "Evaluation of the Effect of the AP1000 Enhanced Shield Building Design on the Containment Response and Safety Analyses", to the Document Control Desk. The proprietary information as submitted by Westinghouse for the AP1000 Design Certification Amendment application is expected to be applicable in all license submittals referencing the AP1000 Design Certification and the AP1000 Design Certification Amendment Application in response to certain NRC requirements for justification of compliance of the safety system to regulations.

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

- (a) Manufacture and deliver products to utilities based on proprietary designs.
- (b) Advance the AP1000 Design and reduce the licensing risk for the application of the AP1000 Design Certification
- (c) Determine compliance with regulations and standards
- (d) Establish design requirements and specifications for the system.

Further this information has substantial commercial value as follows:

- (a) Westinghouse plans to sell the use of similar information to its customers for purposes of plant construction and operation.
- (b) Westinghouse can sell support and defense of safety systems based on the technology in the reports.
- (c) The information requested to be withheld reveals the distinguishing aspects of an approach and schedule 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 digital technology safety systems 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.