



Westinghouse Electric Company  
Nuclear Power Plants  
1000 Westinghouse Drive  
Cranberry Township, Pennsylvania 16066  
USA

Document Control Desk  
U S Nuclear Regulatory Commission  
Two White Flint North  
11555 Rockville Pike  
Rockville, MD 20852-2738

Direct tel: 412-374-6919  
Direct fax: 724-940-8505  
e-mail: delongra@westinghouse.com

Our ref: DCP\_NRC\_003214

June 13, 2012

Subject: 10 CFR 50.46 Thirty (30) Day Report for the AP1000® Standard Plant Design

Pursuant to 10 CFR 50.46(a)(3)(ii), Westinghouse Electric Company is submitting this report to document the effect of significant changes or errors in the emergency core cooling system (ECCS) evaluation model or in the application of the model.

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-12-3458 (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), "10 CFR 50.46 Thirty (30) Day Report for the AP1000 Standard Plant Design – Proprietary" and "10 CFR 50.46 Thirty (30) Day Report for the AP1000 Standard Plant Design – Non-Proprietary" are submitted as Enclosures 3 and 4. Correspondence with respect to the affidavit or Application for Withholding should include our reference number AW-12-3458 and should be addressed to J. A. Gresham, Manager, Regulatory Compliance, Westinghouse Electric Company LLC, Suite 428, 1000 Westinghouse Drive, Cranberry Township, Pennsylvania 16066.

The NRC issued Information Notice 2011-21 (Reference 1) which notified addressees of recent information obtained concerning the impact of irradiation on fuel thermal conductivity and its potential to cause significantly higher than predicted peak cladding temperature (PCT) results in realistic ECCS evaluation models. Westinghouse has evaluated the effect of thermal conductivity degradation and peaking factor burndown on the AP1000 Large Break Loss-of-Coolant Accident (LBLOCA) Analysis of Record presented in the AP1000 Design Control Document Revision 19 (Reference 2). The most recent 10 CFR 50.46 report for the AP1000 Standard Plant Design was transmitted in Reference 3. The summary of the updated PCT allocations and their bases are provided in Enclosures 3 and 4. The results of the evaluations as reflected in the information provided in Enclosures 3 and 4 demonstrate that the 10 CFR 50.46 PCT criterion continues to be satisfied.

Since the evaluation of the effect of thermal conductivity degradation and peaking factor burndown resulted in a significant change in PCT (greater than 50°F), a proposed schedule for re-analysis of the LBLOCA is required to be provided. The LBLOCA re-analysis which explicitly accounts for thermal conductivity degradation will be provided to the NRC by December 2016. This date is contingent upon

A002  
NRR

the availability of an NRC approved fuel performance analysis methodology that includes the effects of thermal conductivity degradation.

The information included in this letter is generic and is expected to apply to all holders of AP1000 combined licenses (COL) and applicants referencing the AP1000 Design Certification and Design Certification Amendment Application. By copy of this letter, AP1000 COL holders and applicants are hereby notified of any changes or errors in the AP1000 Standard Design PCT as required by 10 CFR 50.46(a)(3)(iii).

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

References:

1. NRC Information Notice 2011-21, Realistic Emergency Core Cooling System Evaluation Model Effects Resulting from Nuclear Fuel Thermal Conductivity Degradation, December 13, 2011
2. DCP\_NRC\_003177, Westinghouse Electric Company – Updated Application to Amend the AP1000® Nuclear Power Plant Design Certification Rule, June 13, 2011
3. DCP\_NRC\_003207, 10 CFR 50.46 Annual Report for the AP1000 Standard Plant Design, March 15, 2012

Very truly yours,



Richard A. DeLong  
Acting Director  
New Plant Licensing

/Enclosures

1. AW-12-3458 "Application for Withholding Proprietary Information from Disclosure," dated June 13, 2012
2. AW-12-3458, Affidavit, Proprietary Information Notice, Copyright Notice dated June 13, 2012
3. 10 CFR 50.46 Thirty (30) Day Report for the AP1000 Standard Plant Design – Proprietary
4. 10 CFR 50.46 Thirty (30) Day Report for the AP1000 Standard Plant Design – Non-Proprietary

cc: M. Tonacci - U.S. NRC  
R. Joshi - U.S. NRC  
R. Kitchen - Progress Energy  
A. Monroe - SCANA  
A. Aughtman - Southern Company  
C. Pierce - Southern Company  
B. Maher - Florida Power & Light  
P. Jacobs - Florida Power & Light  
J. Thornton - Duke Energy  
T. Spink - TVA  
E. Schmiech - Westinghouse  
J. Monahan - Westinghouse  
J. DeBlasio - Westinghouse  
A. Colussy - Westinghouse  
L. Brown - Westinghouse  
S. Ritterbusch - Westinghouse  
K. Cummings - Westinghouse  
K. Drudy - Westinghouse  
M. Leslie - Westinghouse  
D. Golden - Westinghouse  
R. Lenahan - Westinghouse

Internal Reference: LTR-LIS-12-288

ENCLOSURE 1

AW-12-3458

APPLICATION FOR WITHHOLDING  
PROPRIETARY INFORMATION FROM DISCLOSURE



Westinghouse Electric Company  
Nuclear Power Plants  
1000 Westinghouse Drive  
Cranberry Township, Pennsylvania 16066  
USA

U.S. Nuclear Regulatory Commission  
ATTENTION: Document Control Desk  
Washington, D.C. 20555

Direct tel: 412-374-5290  
Direct fax: 724-940-8505  
e-mail: winterjw@westinghouse.com

Our ref: AW-12-3458

June 13, 2012

APPLICATION FOR WITHHOLDING PROPRIETARY  
INFORMATION FROM PUBLIC DISCLOSURE

Subject: 10 CFR 50.46 Thirty (30) Day Report for the AP1000® Standard Plant Design

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 customarily held in confidence.

The proprietary material for which withholding is being requested is identified in the proprietary version of the subject slides. In conformance with 10 CFR Section 2.390, Affidavit AW-12-3458 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 the proprietary aspects of this application for withholding or the accompanying affidavit should reference AW-12-3458 and should be addressed to J. A. Gresham, Manager, Regulatory Compliance, Westinghouse Electric Company LLC, Suite 428, 1000 Westinghouse Drive, Cranberry Township, Pennsylvania 16066.

Very truly yours,

A handwritten signature in black ink, appearing to read "James W. Winters", written over a horizontal line.

James W. Winters  
Manager  
Passive Plant Technology

AW-12-3458  
June 13, 2012

ENCLOSURE 2

Affidavit

AW-12-3458  
June 13, 2012

AFFIDAVIT

COMMONWEALTH OF PENNSYLVANIA:

ss

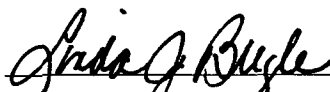
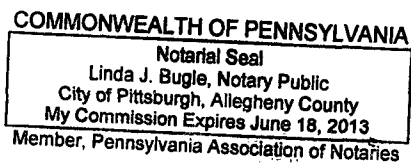
COUNTY OF BUTLER:

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



James W. Winters  
Manager, Passive Plant Technology

Sworn to and subscribed  
before me this 13<sup>th</sup> day  
of June 2012.

  
Notary Public

- (1) I am International Manager, Passive Plant Technology, 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 "10 CFR 50.46 Thirty (30) Day Report for the AP1000® Standard Plant Design", being transmitted by Westinghouse letter (DCP\_NRC\_003214) and Application for Withholding Proprietary Information from Public Disclosure, 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 licensee 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.