



John P. Broschak
Vice President Engineering

January 31, 2012
ET 12-0001

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555

- Reference:
- 1) Letter ET 10-0025, dated November 4, 2010, from T. J. Garrett, WCNOC, to USNRC
 - 2) Electronic Mail dated September 22, 2011, from J. R. Hall, USNRC, to D. M. Hooper, WCNOC
 - 3) Letter ET 11-0010, dated October 19, 2011, from R. P. Clemens, WCNOC, to USNRC

Subject: Docket No. 50-482: Supplemental Information Related to Response to Request for Additional Information Regarding License Amendment Request to Revise Technical Specification 5.6.5, "CORE OPERATING LIMITS REPORT (COLR)," for Large Break Loss-of-Coolant Accident Analysis Methodology

Gentlemen:

Reference 1 provided Wolf Creek Nuclear Operating Corporation's (WCNOC) application to revise Technical Specification (TS) 5.6.5, "CORE OPERATING LIMITS REPORT (COLR)," to replace the existing large break loss-of-coolant accident (LOCA) analysis methodology (WCAP-10266-P-A) with a best estimate large break LOCA analysis based on WCAP-16009-P-A, "Realistic Large Break LOCA Evaluation Methodology Using Automated Statistical Treatment of Uncertainty Method (ASTRUM)." Reference 2 provided a request for additional information related to the application. Reference 3 provided WCNOC's response to the request for additional information.

During a teleconference on December 19, 2011, the NRC requested supplemental information to support the response to Question 2.d of Reference 3. Specifically, the NRC requested the following:

A001
A002
NRC

Provide clarification on how Westinghouse Electric Company determined if an increased number of circumferential downcomer nodding stacks is necessary for a specific plant model and ASTRUM analysis. More specifically, for the Wolf Creek Generating Station (WCGS), how did Westinghouse Electric Company determine that four circumferential nodding stacks are sufficient to model the downcomer response for WCGS? What process does Westinghouse Electric Company use to confirm that this approach is correct?

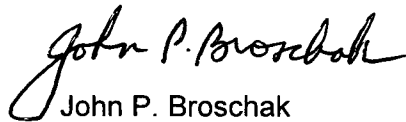
Enclosure I provides the proprietary Westinghouse Electric Company LLC Attachment 1A of LTR-LIS-12-24, Revision 1, "Suggested Response to Additional NRC RAI for Wolf Creek BELOCA Project," in response to the requested supplemental information. Enclosure II provides the non-proprietary Westinghouse Electric Company LLC Attachment 1B of LTR-LIS-12-24, Revision 1, "Suggested Response to Additional NRC RAI for Wolf Creek BELOCA Project." As Enclosure I contains information proprietary to Westinghouse Electric Company LLC, it is supported by an affidavit signed by Westinghouse Electric Company LLC, 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 10 CFR 2.390 of the Commission's regulations. Accordingly, it is respectfully requested that the information, which is proprietary to Westinghouse, be withheld from public disclosure in accordance with 2.390 of the Commission's regulations. This affidavit, along with Westinghouse authorization letter, CAW-12-3371, "Application for Withholding Proprietary Information from Public Disclosure," is contained in Enclosure III.

The additional information does not expand the scope of the application as originally noticed, and does not impact the conclusions of the Nuclear Regulatory Commission (NRC) staff's original proposed no significant hazards consideration determination as published in the Federal Register (75 FR 81673).

In accordance with 10 CFR 50.91, a copy of this submittal is being provided to the designated Kansas State official.

This letter contains no commitments. If you have any questions concerning this matter, please contact me at (620) 364-4085, or Mr. Gautam Sen at (620) 364-4175.

Sincerely,



John P. Broschak

JPB/rlt

Enclosure: I Attachment 1A of LTR-LIS-12-24, Revision 1 "Suggested Response to Additional NRC RAI for Wolf Creek BELOCA Project" (Proprietary)
 II Attachment 1B of LTR-LIS-12-24, Revision 1, "Suggested Response to Additional NRC RAI for Wolf Creek BELOCA Project" (Non-Proprietary)
 III CAW-12-3371, "Application for Withholding Proprietary Information from Public Disclosure"

cc: E. E. Collins (NRC), w/e
 T. A. Conley (KDHE), w/e II
 J. R. Hall (NRC), w/e
 N. F. O'Keefe (NRC), w/e
 Senior Resident Inspector (NRC), w/e

STATE OF KANSAS)
) SS
COUNTY OF COFFEY)

John P. Broschak, of lawful age, being first duly sworn upon oath says that he is Vice President Engineering of Wolf Creek Nuclear Operating Corporation; that he has read the foregoing document and knows the contents thereof; that he has executed the same for and on behalf of said Corporation with full power and authority to do so; and that the facts therein stated are true and correct to the best of his knowledge, information and belief.

By John P. Broschak
John P. Broschak
Vice President Engineering

SUBSCRIBED and sworn to before me this 31st day of January, 2012.

Gayle Shepherd
Notary Public



Expiration Date 7/24/2015

Enclosure II (2 pages)

**Westinghouse Electric Company LLC, Attachment 1B of LTR-LIS-12-24, Revision 1,
"Suggested Response to Additional NRC RAI for Wolf Creek BELOCA Project"
(Non-Proprietary)**

Westinghouse Non-Proprietary Class 3
Attachment 1B to LTR-LIS-12-24 Revision 1 (Page 1 of 2)

Suggested Response to Additional NRC RAI for Wolf Creek BELOCA Project

Preface:

The initial RAIs were addressed in LTR-LIS-11-541 and provided to the NRC in Wolf Creek Letter ET 11-0010, dated October 19, 2011 (NRC ADAMS Accession # ML11312A137). Since, the additional RAI has been requested:

Provide clarification on how we determine if an increased number of circumferential downcomer nodding stacks is necessary for a specific plant model and ASTRUM analysis. More specifically for Wolf Creek, how did Westinghouse determine that four circumferential nodding stacks are sufficient to model the downcomer response for Wolf Creek? What process does Westinghouse use to confirm that this approach is correct?

The Licensing Amendment Request (LAR) Document being NRC reviewed is Wolf Creek Letter ET 10-0025, Docket No. 50-482, License No. NPF-42, November 4, 2010 (NRC ADAMS Accession # ML103200209).

Westinghouse Non-Proprietary Class 3
Attachment 1B to LTR-LIS-12-24 Revision 1 (Page 2 of 2)

RAI:

Provide clarification on how we determine if an increased number of circumferential downcomer nodding stacks is necessary for a specific plant model and ASTRUM analysis. More specifically for Wolf Creek, how did Westinghouse determine that four circumferential nodding stacks are sufficient to model the downcomer response for Wolf Creek? What process does Westinghouse use to confirm that this approach is correct?

Response:

As described in the response to RAI #9 in Reference 1, the results of the CCTF Test 62, UPTF Test 6, and UPTF Test 25A simulations for the approved CQD methodology are described in Sections 14-2-6-1, 14-4-5 through 14-4-9, and 14-4-11 of the CQD (Reference 2), respectively. The as-approved methodology includes a single downcomer channel stack per loop, and is considered to be sufficient.

At times, recent Westinghouse BELOCA analyses have modeled three downcomer channel stacks per loop. The results of the above simulations with three downcomer channel stacks per loop are described in Reference 3. [

] ^{a,c}

Reference(s):

1. Wolf Creek Letter ET 11-0010, dated October 19, 2011 (NRC ADAMS Accession # ML11312A137).
2. Bajorek, S. M., et al., March 1998, "Code Qualification Document for Best Estimate LOCA Analysis," Volume 1 Revision 2, and Volumes 2 through 5, Revision 1, WCAP-12945-P-A (Proprietary).
3. Letter from Jensen, J. N. to USNRC, December 27, 2007, "License Amendment Request Regarding Large Break Loss-of-Coolant Accident Analysis Methodology," Enclosure 3, AEP:NRC:7565-01.

Enclosure III (7 pages)

**Westinghouse Electric Company LLC, CAW-12-3371, "Application for Withholding
Proprietary Information from Public Disclosure"**



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Nuclear Services
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USA

U.S. Nuclear Regulatory Commission
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Rockville, MD 20852

Direct tel: (412) 374-4643
Direct fax: (724) 720-0754
e-mail: greshaja@westinghouse.com
Proj letter: SAP-12-7, Rev. 1

CAW-12-3371

January 25, 2012

APPLICATION FOR WITHHOLDING PROPRIETARY
INFORMATION FROM PUBLIC DISCLOSURE

Subject: LTR-LIS-12-24 Revision 1, Attachment 1A, "Suggested Response to Additional NRC RAI for Wolf Creek BELOCA Project" (Proprietary)

The proprietary information for which withholding is being requested in the above-referenced report is further identified in Affidavit CAW-12-3371 signed by the owner of the proprietary information, Westinghouse Electric Company LLC. The affidavit, which accompanies this letter, sets forth the basis on which the information may be withheld from public disclosure by the Commission and addresses with specificity the considerations listed in paragraph (b)(4) of 10 CFR Section 2.390 of the Commission's regulations.

Accordingly, this letter authorizes the utilization of the accompanying affidavit by Wolf Creek Nuclear Operating Corporation (WCNOC).

Correspondence with respect to the proprietary aspects of the application for withholding or the Westinghouse affidavit should reference this letter, CAW-12-3371, and should be addressed to J. A. Gresham, Manager, Regulatory Compliance, Westinghouse Electric Company, Suite 428, 1000 Westinghouse Drive, Cranberry Township, Pennsylvania 16066.

Very truly yours,

A handwritten signature in black ink, appearing to read 'J. A. Gresham', written over a horizontal line.
J. A. Gresham, Manager
Regulatory Compliance

Enclosures

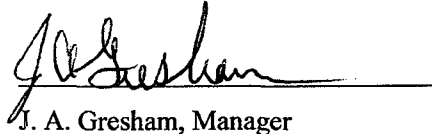
AFFIDAVIT

COMMONWEALTH OF PENNSYLVANIA:

SS

COUNTY OF BUTLER:

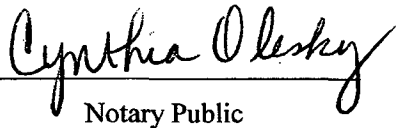
Before me, the undersigned authority, personally appeared J. A. Gresham, who, being by me duly sworn according to law, deposes and says that he is authorized to execute this Affidavit on behalf of Westinghouse Electric Company LLC (Westinghouse), and that the averments of fact set forth in this Affidavit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



J. A. Gresham, Manager

Regulatory Compliance

Sworn to and subscribed before me
this 25th day of January 2012



Notary Public

COMMONWEALTH OF PENNSYLVANIA

Notarial Seal

Cynthia Olesky, Notary Public

Manor Boro, Westmoreland County

My Commission Expires July 16, 2014

Member, Pennsylvania Association of Notaries

- (1) I am Manager, Regulatory Compliance, in Nuclear Services, Westinghouse Electric Company LLC (Westinghouse), and as such, I have been specifically delegated the function of reviewing the proprietary information sought to be withheld from public disclosure in connection with nuclear power plant licensing and rule making proceedings, and am authorized to apply for its withholding on behalf of Westinghouse.
- (2) I am making this Affidavit in conformance with the provisions of 10 CFR Section 2.390 of the Commission's regulations and in conjunction with the Westinghouse Application for Withholding Proprietary Information from Public Disclosure accompanying this Affidavit.
- (3) I have personal knowledge of the criteria and procedures utilized by Westinghouse in designating information as a trade secret, privileged or as confidential commercial or financial information.
- (4) Pursuant to the provisions of paragraph (b)(4) of Section 2.390 of the Commission's regulations, the following is furnished for consideration by the Commission in determining whether the information sought to be withheld from public disclosure should be withheld.
 - (i) The information sought to be withheld from public disclosure is owned and has been held in confidence by Westinghouse.
 - (ii) The information is of a type customarily held in confidence by Westinghouse and not customarily disclosed to the public. Westinghouse has a rational basis for determining the types of information customarily held in confidence by it and, in that connection, utilizes a system to determine when and whether to hold certain types of information in confidence. The application of that system and the substance of that system constitutes Westinghouse policy and provides the rational basis required.

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

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

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

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

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 LTR-LIS-12-24 Revision 1, Attachment 1A, "Suggested Response to Additional NRC RAI for Wolf Creek BELOCA Project" (Proprietary) for submittal to the Commission, being transmitted by Wolf Creek Nuclear Operating Corporation letter 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 review and may be used only for that purpose.

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

- (a) Obtain NRC review of Westinghouse responses to Requests for Additional Information to support the licensing of the Wolf Creek BELOCA analysis.

Further this information has substantial commercial value as follows:

- (a) Westinghouse plans to sell the use of the information to its customers for the purpose of licensing the Wolf Creek BELOCA analysis.
- (b) Westinghouse can sell support and defense of the use of the BELOCA criteria.
- (c) 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 calculations 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.