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Palo Verde 1, 2 & 3  
Constellation Energy Group  
Calvert Cliffs 1 & 2  
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Millstone 2 & 3  
Dominion Virginia Power  
North Anna 1 & 2  
Surry 1 & 2  
Duke Energy  
Catawba 1 & 2  
McGuire 1 & 2  
Entergy Nuclear Northeast  
Indian Point 2 & 3  
Entergy Nuclear South  
ANO 2  
Waterford 3  
Exelon Generation Company LLC  
Braidwood 1 & 2  
Byron 1 & 2  
FirstEnergy Nuclear Operating Co.  
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St. Lucie 1 & 2  
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Nuclear Management Co.  
Kewaunee  
Palisades  
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Prairie Island  
Omaha Public Power District  
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PSEG - Nuclear  
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Asco 1 & 2  
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Almaraz 1 & 2  
Ringhals AB  
Ringhals 2 - 4  
Taiwan Power Co.  
Maanshan 1 & 2

January 22, 2004  
WOG-04-039

WCAP-16175-P/NP, Rev. 0  
Project Number 694

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

Attention: Chief, Information Management Branch  
Division of Program Management

Subject: **Response to Request for Additional Information – CE NPSD-1199-P (WCAP-16175-P/NP, Rev. 0), “Model for Failure of RCP Seals Given Loss of Seal Cooling”**

**References:**

1. Letter CEOG-00-305, “Request for Review of CE Owners Group Report, “Model for Failure of RCP Seals Given Loss of Seal Cooling,” October 18, 2000.
2. NRC Letter, D. Holland (NRC) to G. Bischoff (Westinghouse), “Request for Additional Information Regarding CE NPSD-1199-P, Model for Failure of RCP Seals Given loss of Seal Cooling,” (TAC No. MB5803), July 24, 2003.
3. Letter WOG-03-510, “Westinghouse Owners Group Response to Request for Additional Information on CE NPSD-1199, “Model for Failure of RCP Seals Given Loss of Seal Cooling,” (TAC MB5803), October 6, 2003.

The Combustion Engineering Owners Group submitted CE NPSD-1199-P, Revision 0, “Model for Failure of RCP Seals Given Loss of Seal Cooling,” for staff review in October 2000 (Ref. 1). By letter dated July 24, 2003, the Nuclear Regulatory Commission issued a Request for Additional Information (RAI) for CE NPSD-1199-P, Rev. 0 (Ref. 2). Enclosed is WCAP-16175-P (Proprietary), Revision 0, “Model for Failure of RCP Seals Given Loss of Seal Cooling in CE NSSS Plants,” which serves as a revision to CE NPSD-1199 and incorporates the RAI responses provided in Reference 3. Also enclosed is WCAP-16175-NP (Non-Proprietary), Revision 0.

WCAP-16175-P, Revision 0, contains information proprietary to Westinghouse; it is requested that this information be withheld from public disclosure pursuant to 10 CFR 2.790. The reason for withholding this proprietary information is contained in the enclosed affidavit CAW-04-1768.

D048

*Extra Copy  
forwarded to Drew Holland*



If you require further information, please contact Mr. Paul Hijeck in the Owners Group Program Management Office at (860) 731-6240.

Sincerely,

A handwritten signature in black ink, appearing to read 'F. Schiffley, II', with a long horizontal flourish extending to the right.

Frederick P. "Ted" Schiffley, II  
Chairman, Westinghouse Owners Group

Enclosures

cc: WOG Steering Committee  
WOG Management Committee  
WOG Risk Management Subcommittee  
WOG Project Management Office  
D. G. Holland, USNRC (4-P, 2-NP copies; via Federal Express)  
P. J. Hijeck  
B. D. Sloane  
D. J. Finnicum  
C. B. Brinkman  
J. A. Gresham





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Indian Point 2 & 3  
Entergy Nuclear South  
ANO 2  
Waterford 3  
Exelon Generation Company LLC  
Braidwood 1 & 2  
Byron 1 & 2  
FirstEnergy Nuclear Operating Co.  
Beaver Valley 1 & 2  
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Takahama 1  
Ohi 1 & 2  
Korea Hydro & Nuclear Power Co.  
Kori 1 – 4  
Ulchin 3 & 4  
Yonggwang 1 - 5  
British Energy plc  
Sizewell B  
NEK  
Krško  
Spanish Utilities  
Asco 1 & 2  
Vandellós 2  
Almaraz 1 & 2  
Ringhals AB  
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January 22, 2004  
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The Combustion Engineering Owners Group submitted CE NPSD-1199-P, Revision 0, “Model for Failure of RCP Seals Given Loss of Seal Cooling,” for staff review in October 2000 (Ref. 1). By letter dated July 24, 2003, the Nuclear Regulatory Commission issued a Request for Additional Information (RAI) for CE NPSD-1199-P, Rev. 0 (Ref. 2). Enclosed is WCAP-16175-P (Proprietary), Revision 0, “Model for Failure of RCP Seals Given Loss of Seal Cooling in CE NSSS Plants,” which serves as a revision to CE NPSD-1199 and incorporates the RAI responses provided in Reference 3. Also enclosed is WCAP-16175-NP (Non-Proprietary), Revision 0.

WCAP-16175-P, Revision 0, contains information proprietary to Westinghouse; it is requested that this information be withheld from public disclosure pursuant to 10 CFR 2.790. The reason for withholding this proprietary information is contained in the enclosed affidavit CAW-04-1768.



If you require further information, please contact Mr. Paul Hijeck in the Owners Group Program Management Office at (860) 731-6240.

Sincerely,

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Frederick P. "Ted" Schiffley, II  
Chairman, Westinghouse Owners Group

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C. B. Brinkman  
J. A. Gresham





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Our ref: CAW-04-1768  
January 21, 2004

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

Subject: Transmittal of Revision 00 to WCAP-16175-P (CE NPSD-1199, Rev 01), "Model for Failure of RCP Seals Given Loss of Seal Cooling in CE NSSS Plants," January 2004. (Proprietary)

Reference: (1) Request for Additional Information (RAI) - NPSD-1199-P, "Model for Failure of RCP Seals Given Loss of Seal Cooling" (TAC No. MB0337) dated October 16, 2001.  
(2) Request for Additional Information regarding CE NPSD-1199-P, "Model for Failure of RCP Seals Given Loss of Seal Cooling" (TAC No. MB5803) dated July 24, 2003.

Westinghouse hereby transmits the enclosed affidavit for withholding concerning the subject proprietary topical report including responses to the Referenced staff requests for additional information. Affidavit CAW-04-1768, signed by Westinghouse Electric Company LLC, the owner of the information, sets forth the basis on which the proprietary information is requested to be withheld from public disclosure by the Commission and addresses the considerations listed in paragraph (b)(4) of 10 CFR Section 2.790 of the Commission's regulations.

In conformance with the requirements of 10 CFR 2.790, Westinghouse confirms that the information contained within WCAP-16175-P, R00 is proprietary. The justification for claiming this report as proprietary is identified in Sections (4)(ii)(a) through (4)(ii)(f) of the enclosed affidavit.

Correspondence with respect to the proprietary aspects of the application for withholding or the Westinghouse affidavit should reference this letter, CAW-04-1768, and should be addressed to the undersigned.

Very truly yours,

A handwritten signature in black ink, appearing to read 'Ian C. Rickard', written over a horizontal line.

Ian C. Rickard  
Licensing Project Manager  
Regulatory Compliance and Plant Licensing

Enclosure

cc: D. G. Holland / NRR

A BNFL Group Company



bcc: J. A. Gresham (ECE 4-7A)  
C. B. Brinkman, (Rockville, MD 20852)  
D. J. Finnicum (Windsor)  
RCPL Administrative Aide (ECE 4-7A)







- (1) I, Ian C. Rickard, depose and say that I am the Licensing Project Manager 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 the Westinghouse Electric Company LLC.
- (2) I am making this Affidavit in conformance with the provisions of 10 CFR Section 2.790 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 the Westinghouse Electric Company LLC 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 2.790 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 for classification of proprietary information, 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 2.790, 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 contained in the Westinghouse report WCAP-16175-P, Rev 00, (CE NPSD-1199-P, Rev 01), "Model for Failure of RCP Seals Given Loss of Seal Cooling in CE NSSS Plants," dated January 2004.



The information is part of a model that will enable Westinghouse to estimate the probability of failure of a reactor coolant pump seal given loss of cooling to the seal, and in particular to supporting utilities with CE NSSS plants in the application of such, including:

- (a) The identification of important phenomena relevant to the application of the reactor coolant pump seal failure model, including quantification of dominant failure mechanisms, operational considerations and model implementation,
- (b) A generic methodology for the applicability of the reactor coolant pump seal failure model to utilities with CE NSSS plants, and
- (c) An evaluation of problems with reactor coolant pump seals in CE NSSS plants that have common cause implications and the probability of such events leading to seal failure.

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 meeting NRC requirements for licensing documentation.
- (b) Westinghouse can sell the application and defense of the reactor coolant pump seal failure model.
- (c) The information requested to be withheld reveals the distinguishing aspects of a methodology that 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 advanced nuclear power plant designs and to provide 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**

In order to conform to the requirements of 10 CFR 2.790 of the Commission's regulations concerning the protection of proprietary information so submitted to the NRC, Westinghouse confirms that the information in WCAP-16175-P, Rev 00 is proprietary. The justification for claiming the report as proprietary is indicated in Sections (4)(ii)(a) through (4)(ii)(f) of the affidavit accompanying this transmittal.

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**COPYRIGHT NOTICE**

WCAP-16175-P, Rev 00 transmitted herewith bears a Westinghouse copyright notice. The NRC is permitted to make the number of copies of the information contained in this report that 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 2.790 regarding restrictions on public disclosure to the extent such information has been identified as proprietary by Westinghouse, copyright protection notwithstanding. Copies made by the NRC must include the copyright notice in all instances and the proprietary notice if the original was identified as proprietary.