



May 20, 2004

WCAP-15973-P Rev 01 (Proprietary)
WCAP-15973-NP Rev 01 (Non-Proprietary)

WOG-04-264

Project No. 694

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

ATTN: Chief, Information Management Branch
Division of Program Management

Subject:

1. Transmittal of WCAP-15973-P Rev 01 (Proprietary) and WCAP-15973-NP Rev 01 (Non-Proprietary), "Low Alloy Steel Component Corrosion Analysis Supporting Small-Diameter Alloy 600/690 Nozzle Repair/Replacement Programs," May 2004, and
2. Westinghouse Calculation CN-CI-02-71 (Proprietary) Rev 01, 3/31/04.

Reference:

1. G. Pavis (CEG) to NRC Document Control Desk, CEOG-02-243, Transmittal Letter enclosing Revision 00 of Combustion Engineering Owners Group Reports WCAP-15973-P (Proprietary) and WCAP-15973-NP (Non-Proprietary) for NRC Review, dated November 11, 2002.
2. F. Schiffler (Exelon) to NRC Document Control Desk, WOG-04-115, Transmittal Letter requesting that NRC Review of WCAP-15973-P/NP Revision 00 be Suspended, dated 3/05/04.

By letter dated November 11, 2002, the Combustion Engineering Owners Group submitted WCAP-15973 Rev 00, "Low-Alloy Steel Component Corrosion Analysis Supporting Small-Diameter Alloy 600/690 Nozzle Repair/Replacement Programs," for NRC review and approval (Reference 1). On March 5, 2004, the Westinghouse Owners Group notified the NRC that WCAP-15973 Rev 00 was being withdrawn due to errors discovered in the supporting analyses and that the review of this report should be suspended (Reference 2).

Transmitted herewith is Rev 01 of WCAP-15973. This revision corrects the errors identified in Rev 00 with changes from Rev 00 identified by margin bars. The WOG hereby requests that the NRC resume the review of WCAP-15973, Rev 01, which provides the technical justification necessary to support licensees in evaluating plant

- Domestic Members*
- AmerenUE
 - Callaway
 - American Electric Power Co.
D.C. Cook 1 & 2
 - Arizona Public Service Co.
Palo Verde 1, 2 & 3
 - Constellation Energy Group
Calvert Cliffs 1 & 2
 - Dominion Nuclear Connecticut
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.
Beaver Valley 1 & 2
 - FPL Group
St. Lucie 1 & 2
Seabrook
Turkey Point 3 & 4
 - Nuclear Management Co.
Kewaunee
Palisades
Point Beach 1 & 2
Prairie Island
 - Omaha Public Power District
Fort Calhoun
 - Pacific Gas & Electric Co.
Diablo Canyon 1 & 2
 - Progress Energy
H. B. Robinson 2
Shearon Harris
 - PSEG - Nuclear
Salem 1 & 2
 - Rochester Gas & Electric Co.
R. E. Ginna
 - South Carolina Electric & Gas Co.
V. C. Summer
 - Southern California Edison
SONGS 2 & 3
 - STP Nuclear Operating Co.
South Texas Project 1 & 2
 - Southern Nuclear Operating Co.
J. M. Farley 1 & 2
A. W. Vogtle 1 & 2
 - Tennessee Valley Authority
Sequoyah 1 & 2
Watts Bar 1
 - TXU Electric
Commanche Peak 1 & 2
 - Wolf Creek Nuclear Operating Corp.
Wolf Creek

- International Members*
- Electrabel
Doel 1, 2, 4
Tihange 1 & 3
 - Electricité de France
 - Kansai Electric Power Co.
Mihama 1
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
Ringhals 2 - 4
 - Taiwan Power Co.
Maanshan 1 & 2

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design changes, licensing issues, and plant operability issues related to repair or replacement of small diameter Alloy 600/690 nozzles in the reactor coolant pressure boundary using either the mechanical nozzle seal assembly or the half-nozzle repair/replacement technique. The objective is that, once approved, each participating Owners Group member may reference this report as an acceptable approach for addressing nozzle repair/replacements or in licensee submittals.

Enclosure 1 provides Westinghouse letter CAW-04-1832, an application for withholding proprietary information contained in WCAP-15973-P Rev 01 and calculation CN-CI-02-71 Rev 01 from public disclosure pursuant to 10 CFR 2.390.

Enclosure 2 provides Westinghouse Calculation CN-CI-02-71 Rev 01 (Proprietary) entitled "Summary of Fatigue Crack Growth Evaluation Associated with Small Diameter Nozzles in CEOG Plants" dated March 31, 2004. This corrected calculation, with the changes identified by margin bars, provides details of the fatigue crack growth evaluation associated with small diameter nozzles referenced in WCAP-15973. This calculation is provided to assist the Staff in their review of WCAP-15973.

Please feel free to call Steve Lurie at 860-731-6241 if you have any questions concerning this matter.

Sincerely yours,



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

Enclosures: WCAP-15973-P/NP Rev. 01 (4-P, 2-NP)
CN-CI-02-71, Rev 01 (4-P)

cc: G. Shukla, NRC (via FedEx)
Materials Subcommittee
Steering Committee
Licensing Subcommittee
PMO
E. Siegel
C. Brinkman
J. Gresham
S. DiTommaso

Enclosure 1

CAW-04-1831

**Request for Withholding Proprietary Information
Pursuant to 10 CFR 2.390**



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USA

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Our ref: CAW-04-1831
May 20, 2004

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

Reference:

- (1) WCAP-15973-P Rev 01 (Proprietary) "Low Alloy Steel Component Corrosion Analysis Supporting Small-Diameter Alloy 600/690 Nozzle Repair/Replacement Programs," May 2004.
- (2) Westinghouse Calculation CN-CI-02-71 R01, "Summary of Fatigue Crack Growth Evaluation Associated with Small Diameter Nozzles in CEOG Plants," 3/31/04.

Westinghouse hereby transmits the above-referenced proprietary documents for which withholding is requested pursuant to Affidavit CAW-04-1831. This affidavit, which accompanies this letter and is signed by the owner of the proprietary information, Westinghouse Electric Company LLC, 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 10 CFR Section 2.390(b)(4) of the Commission's regulations. This letter also authorizes use of the accompanying affidavit by the Westinghouse Owners Group.

In conformance with the requirements of 10 CFR 2.390, Westinghouse confirms that the information contained within the referenced documents is proprietary. The justification for claiming these documents as proprietary is identified in Sections (4)(ii)(a) through (4)(ii)(f) of the enclosed affidavit. Westinghouse also affirms that a nonproprietary version of calculation CN-CI-02-71 does not exist and, due to the extent of proprietary information contained, a nonproprietary version of such calculations would be meaningless.

Communication with respect to the proprietary aspects of the application for withholding or the Westinghouse affidavit should reference this letter, CAW-04-1831, and 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: G. S. Shukla (NRC)

- (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 2.390 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 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 10 CFR 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 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 2.390, 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 contained in (1) Westinghouse Report WCAP-15973-P Rev 01, "Low-Alloy Steel Component Corrosion Analysis Supporting Small-Diameter Alloy 600/690 Nozzle Repair/Replacement Programs" dated May 2004, and (2) Westinghouse Calculation

CN-CI-02-71 R01, "Summary of Fatigue Crack Growth Evaluation Associated with Small Diameter Nozzles in CEOG Plants" dated 3/31/04.

The information is part of a model that will enable Westinghouse to evaluate the fatigue crack growth of a postulated flaw in an instrumentation nozzle, 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 fatigue crack growth model, including quantification of dominant failure mechanisms, operational considerations and model implementation,
- (b) A generic methodology for the applicability of the fatigue crack growth model to utilities with CE NSSS plants, and
- (c) An evaluation of problems with pressurizer nozzles in CE NSSS plants that have common cause implications and the probability of such events leading to nozzle 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 fatigue crack growth evaluation 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 2.390 of the Commission's regulations concerning the protection of proprietary information so submitted to the NRC, Westinghouse confirms that the information in (1) Topical Report WCAP-15973-P Rev 01, "Low-Alloy Steel Component Corrosion Analysis Supporting Small-Diameter Alloy 600/690 Nozzle Repair/Replacement Programs," dated May 2004, and (2) Westinghouse Calculation CN-CI-02-71 R01, "Summary of Fatigue Crack Growth Evaluation Associated with Small Diameter Nozzles in CEOG Plants" dated 3/31/04 is proprietary. The justification for claiming this information as proprietary is indicated in Sections (4)(ii)(a) through (4)(ii)(f) of affidavit CAW-04-1831 accompanying this transmittal.

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