



Westinghouse
Electric Corporation

Energy Systems

Box 355
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February 10, 1992
CAW-92-265

Document Control Desk
US Nuclear Regulatory Commission
Washington, DC 20555

Attention: Dr. Thomas Murley, Director

APPLICATION FOR WITHHOLDING PROPRIETARY
INFORMATION FROM PUBLIC DISCLOSURE

Subject: "J. M. Farley Units 1 and 2 Steam Generator Tube Plugging Criteria
for ODSCC at Tube Support Plates (WCAP 12871, Rev. 2, Proprietary)"

Dear Dr. Murley:

The proprietary information for which withholding is being requested in the above-referenced letter is further identified in Affidavit CAW-92-265 signed by the owner of the proprietary information, Westinghouse Electric Corporation. 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 2.790 of the Commission's regulations.

Accordingly, this letter authorizes the utilization of the accompanying Affidavit by Southern Nuclear Operating Company.

Correspondence with respect to the proprietary aspects of the application for withholding or the Westinghouse affidavit should reference this letter, CAW-92-265, and should be addressed to the undersigned.

Very truly yours,


R. P. DiPiazza, Manager
Nuclear Safety Licensing

/cld
Enclosures

cc: M. P. Siemien, Esq.
Office of the General Counsel, NRC

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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.

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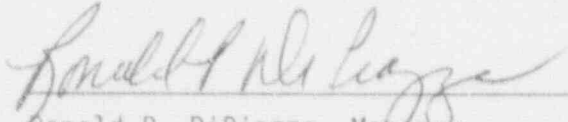
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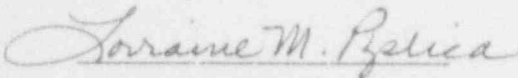
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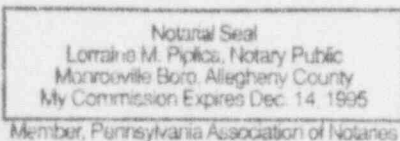
COUNTY OF ALLEGHENY:

Before me, the undersigned authority, personally appeared Ronald P. DiPiaz, 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 Corporation ("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:


Ronald P. DiPiazza, Manager
Nuclear Safety Licensing

Sworn to and subscribed
before me this 12th day
of February, 1992.


Notary Public



- (1) I am Manager, Nuclear Safety Licensing, in the Nuclear and Advanced Technology Division, of the Westinghouse Electric Corporation 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 rulemaking proceedings, and am authorized to apply for its withholding on behalf of the Westinghouse Energy Systems Business Unit.
- (2) I am making this Affidavit in conformance with the provisions of 10CFR 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 Energy Systems Business Unit 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 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.
- (g) It is not the property of Westinghouse, but must be treated as proprietary by Westinghouse according to agreements with the owner.

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 which 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 10CFR Section 2.790, 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 "Farley Units 1 and 2 Steam Generator Tube Plugging Criteria For ODSCC At Tube Support Plates", WCAP-12871 Revision 2, (Proprietary), February 1992, for Joseph M. Farley Units 1 and 2, being transmitted by the Southern Nuclear Operating Company (SNC) letter and Application for Withholding Proprietary Information from Public Disclosure to Document Control Desk to the Attention Dr. Thomas Murley. The proprietary information as submitted for use by Southern Nuclear Operating Company for the J. M. Farley Units 1 and 2 is expected to be applicable in other licensee submittals in response to certain NRC requirements for steam generator plugging criteria at tube support plates.

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

- (a) Provide documentation of the methods for tube plugging criteria for ODSCC at tube support plates.
- (b) Establish applicable analytical technologies.
- (c) Establish the margins against tube burst.
- (d) Assist the customer to obtain NRC approval.

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 support and defense of the technology to its customers in the licensing process.

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 methodologies 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 for developing testing and analytical methods and performing tests.

Further the deponent sayeth not.

Attachment 6

Responses to the January 29, 1992

Request for Additional Information

Responses to the January 29, 1992

Request for Additional Information

1. NRC Question:
Should the most recent results from Trojan be incorporated in the alternate plugging criteria?

Southern Nuclear Response:

Revision 2 to WCAP-12871 has been updated to include to all available Trojan data in support of the alternate plugging criteria. Appendix B addresses the methodology used to include the data.

2. NRC Question:
Additional tubes should be pulled to determine if IGA or circumferential cracking is present at Farley and to verify the burst pressure-bobbin voltage correlation.

Southern Nuclear Response:

Seven tubes with tube support plate intersections have been pulled from Unit 2 since 1985, three at the last outage in support of the alternate plugging criteria. The analysis of these intersections is documented in Section 4 of WCAP-12871, Revision 2. Significant intergranular attack (IGA) has not been found at Farley Nuclear Plant. Volumetric IGA similar to that recently found at other plants has never been found at Farley Nuclear Plant. Consequently, little is to be gained by pulling additional tubes from Unit 2.

On approval of the alternate plugging criteria, Southern Nuclear will attempt to pull two additional tubes from Unit 1 with a total of four intersections. These tube pulls would be based on the priority of pulling a leaking tube, pulling a tube with a large voltage flaw, and, if possible, a dented intersection. The application and/or update of the alternate plugging criteria would not be dependent on completing the examination of these tubes.

The need to pull additional tubes will be evaluated after the Unit 1 outage.

3. NRC Question:
For tube support plates with dent voltages exceeding an allowable threshold, an RPC inspection should be required or the alternate plugging criteria would not apply.

Southern Nuclear Response:

Attachment 1 to this letter includes a sampling plan for use with the proposed interim plugging criteria. The sampling plan places a high priority on conducting an RPC inspection of dented intersections. Based on the results of the Unit 2 outage, Southern Nuclear will evaluate the need to revise the sampling plan for future use.

4. NRC Question:
The analysis guidelines given in Appendix A should be more detailed in order to provide the data analyst with more comprehensive guidance on appropriate procedures to apply for dealing with distorted signals. What information is available on the variation in measure bobbin coil voltages for several analysts evaluating the same data?
- Southern Nuclear Response:
Revision 2 to WCAP-12871, Section 8.8, contains an analysis of variability between analysts. Appendix A has also been updated to provide more guidance to the analyst.
5. NRC Question:
Given the uncertainties in the bobbin coil technique, what is the detection and sizing accuracy of the method described in Appendix A for cracks extending beyond the tube support plate?
- Southern Nuclear Response:
Response provided in February 6, 1992 meeting. Response to be documented in WCAP provided for meeting.
6. NRC Question:
Demonstrate that the cumulative probability of tube burst for the entire steam generator under steam line break is at or below the level given in NUREG-0844.
- Southern Nuclear Response:
Based on practices described in Revision 2 to WCAP-12871, Section 12.4.1, the estimated probability of tube rupture in an SLB, based on a 2.5 volt repair threshold, was less than 1×10^{-5} . This probability is based on running 100,000 Monte Carlo simulations. This probability could be reduced even further; however, the benefit of running additional simulations is questionable.
7. NRC Question:
Bobbin coil voltage - leak rate correlation may have significant error due to the small data base.
- Southern Nuclear Response:
Response provided in February 6, 1992 meeting. Response to be documented in WCAP provided for meeting.
8. NRC Question:
What effect does allowable variations in the fabrication of the four hole standards have on the magnitude of uncertainties?
- Southern Nuclear Response:
Response provided in February 6, 1992 meeting. Response to be documented in WCAP provided for meeting.
9. NRC Question:
What is the probability of detection of "significant" flaws?
- Southern Nuclear Response:
Response provided in February 6, 1992 meeting. Response to be documented in WCAP provided for meeting.

10. NRC Question:

It is recommended that a sampling inspection of about 100 tubes be performed with RPC.

Southern Nuclear Response:

Attachment 1 to this letter includes a sampling plan for use with the proposed interim plugging criteria. The sampling plan places a high priority on conducting an RPC inspection of dented intersections. Based on the results of the Unit 2 outage, Southern Nuclear will evaluate the need to revise the sampling plan for future use.

11. NRC Question:

Are there plans for additional tube pulls to strengthen the data bases and validate the various correlations?

Southern Nuclear Response:

See the response to question 2.

Attachment 7

Unit 2 Eighth Refueling Outage
Proposed Eddy Current Guidelines
for use with the
Interim Plugging Criteria

Eddy Current Guidelines for use with the Interim Plugging Criteria

This attachment contains guidelines which provide direction in applying the interim plugging criteria. The following items define probe specifications, calibration requirements, specific acquisition and analysis criteria, and flaw recording guidelines to be used for the inspection of the steam generators.

Bobbin Coil Probe

1. Bobbin Coil Probe Specification

See Section A.2.1 of Appendix A to WCAP-12871, Revision 2.

2. Bobbin Coil Calibration Standard

See Section A.2.2 and A.2.3 of Appendix A to WCAP-12871, Revision 2.

3. Bobbin Coil Data Acquisition and Analysis

See Section A.2.4, A.2.5 and A.2.6 of Appendix A to WCAP-12871, Revision 2.

Data evaluation of the bobbin signal will be conducted in accordance with Sections A.3.1, A.3.2, A.3.3, A.3.4, and A.3.7 of Appendix A to WCAP-12871, Revision 2, with the exception that the RPC threshold will be reduced to 1.0 volt from 1.5 volts.

4. Bobbin Coil Flaw Recording Guidelines

All flaw signals on the 400/100 mix channel at tube support intersections whose peak to peak voltage exceeds 1.0 volt must be recorded.

RPC Probe

1. RPC Probe Specification

See Section A.2.1 of Appendix A to WCAP-12871, Revision 2.

2. RPC Calibration Standard

See Section A.2.2 of Appendix A to WCAP-12871, Revision 2.

3. RPC Data Acquisition and Analysis

RPC inspection of all tube support intersections with bobbin coil flaw indications registering greater than 1.0 volt shall be inspected with the RPC.

See Section A.3.6 of Appendix A to WCAP-12871, Revision 2.

4. RPC Flaw Recording Guidelines

For TSP intersections with a bobbin flaw indication voltage greater than 1 volt, all RPC indications of flaws shall be recorded.