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Proprietary Information
Withhold from Public Disclosure

Richard J. St. Onge
Director, Nuclear Regulatory Affairs and
Emergency Planning

March 22, 2013

10 CFR 50.4

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

Subject: **Docket No. 50-361**
Response to Request for Additional Information (RAI 50)
Regarding Confirmatory Action Letter Response
(TAC No. ME 9727)
San Onofre Nuclear Generating Station, Unit 2

References:
1. Letter from Mr. Elmo E. Collins (USNRC) to Mr. Peter T. Dietrich (SCE), dated March 27, 2012, Confirmatory Action Letter 4-12-001, San Onofre Nuclear Generating Station, Units 2 and 3, Commitments to Address Steam Generator Tube Degradation

2. Letter from Mr. Peter T. Dietrich (SCE) to Mr. Elmo E. Collins (USNRC), dated October 3, 2012, Confirmatory Action Letter – Actions to Address Steam Generator Tube Degradation, San Onofre Nuclear Generating Station, Unit 2

3. Letter from Mr. James R. Hall (USNRC) to Mr. Peter T. Dietrich (SCE), dated March 18, 2013, San Onofre Nuclear Generating Station Unit 2 - Second Request for Additional Information Regarding Response to Confirmatory Action Letter

Dear Sir or Madam,

On March 27, 2012, the Nuclear Regulatory Commission (NRC) issued a Confirmatory Action Letter (CAL) (Reference 1) to Southern California Edison (SCE) describing actions that the NRC and SCE agreed would be completed to address issues identified in the steam generator tubes of San Onofre Nuclear Generating Station (SONGS) Units 2 and 3. In a letter to the NRC dated October 3, 2012 (Reference 2), SCE reported completion of the Unit 2 CAL actions and included a Return to Service Report (RTSR) that provided details of their completion.

By letter dated March 18, 2013 (Reference 3), the NRC issued Requests for Additional Information (RAIs) regarding the CAL response. Enclosure 2 of this letter provides the response to RAI 50.

Enclosure 2 of this submittal contains proprietary information. SCE requests that this proprietary enclosure be withheld from public disclosure in accordance with 10 CFR 2.390(a)(4). Enclosure 1 provides a notarized affidavit from Westinghouse Electric Company (WEC), which

Proprietary Information
Withhold from Public Disclosure
Decontrolled Upon Removal From Enclosure 2

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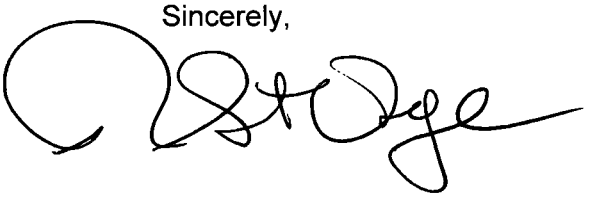
sets forth the basis on which the information in Enclosure 2 may be withheld from public disclosure by the NRC and addresses with specificity the considerations listed by paragraph (b)(4) of 10 CFR 2.390. Proprietary information identified in Enclosure 2 was extracted from WEC document LTR-SGDA-13-316, Revision 0, "San Onofre Nuclear Generating Station Unit 2 MHI Replacement Steam Generator Response to RAI 50," which is addressed in the affidavit. Enclosure 3 provides the non-proprietary version of Enclosure 2.

There are no new regulatory commitments contained in this letter. If you have any questions or require additional information, please call me at (949) 368-6240.

Sincerely,



Enclosures:

1. Notarized Affidavit
2. Response to RAI 50 (Proprietary)
3. Response to RAI 50 (Non-Proprietary)

cc: E. E. Collins, Regional Administrator, NRC Region IV
J. R. Hall, NRC Project Manager, SONGS Units 2 and 3
G. G. Warnick, NRC Senior Resident Inspector, SONGS Units 2 and 3
R. E. Lantz, Branch Chief, Division of Reactor Projects, NRC Region IV

ENCLOSURE 1

Notarized Affidavit

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

U.S. Nuclear Regulatory Commission
Document Control Desk
11555 Rockville Pike
Rockville, MD 20852

Direct tel: (412) 374-4643
Direct fax: (724) 720-0754
e-mail: greshaja@westinghouse.com
Proj letter: CONO-13-24

CAW-13-3672

March 21, 2013

APPLICATION FOR WITHHOLDING PROPRIETARY INFORMATION FROM PUBLIC DISCLOSURE

Subject: LTR-SGDA-13-31 P-Attachment, "San Onofre Nuclear Generating Station Unit 2 MHI Replacement Steam Generator Response to RAI 50" (Proprietary)

The proprietary information for which withholding is being requested in the above-referenced report is further identified in Affidavit CAW-13-3672 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 Southern California Edison.

Correspondence with respect to the proprietary aspects of the application for withholding or the Westinghouse affidavit should reference CAW-13-3672 and should be addressed to James A. Gresham, Manager, Regulatory Compliance, Westinghouse Electric Company, Suite 428, 1000 Westinghouse Drive, Cranberry Township, Pennsylvania 16066.

Very truly yours,

James A. Gresham, Manager
Regulatory Compliance

Enclosures

CAW-13-3672

AFFIDAVIT

COMMONWEALTH OF PENNSYLVANIA:

ss

COUNTY OF BUTLER:

Before me, the undersigned authority, personally appeared James 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:

James A. Gresham, Manager
Regulatory Compliance

Sworn to and subscribed before me
this 21st day of March 2013

Notary Public

COMMONWEALTH OF PENNSYLVANIA
NOTARIAL SEAL
Renee Giampole, Notary Public
Penn Township, Westmoreland County
My Commission Expires September 25, 2013

(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-SGDA-13-31 P-Attachment, "San Onofre Nuclear Generating Unit 2 MHI Replacement Steam Generator Response to RAI 50," for submittal to the Commission, being transmitted by Southern California Edison 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 the calculation of fluidelastic excitation of steam generator tubes and may be used only for that purpose.

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

(a) Respond to NRC Request for Additional Information on intermediate details of the Westinghouse flow induced vibration (FIV) calculations for several limiting tubes. The information provided will enable the NRC to perform a comparison between Westinghouse and Mitsubishi Heavy Metal Industries (MHI) FIV methods and results.

Further this information has substantial commercial value as follows:

(a) Westinghouse plans to sell the use of similar information to its customers for the purpose of evaluating the impact of fluidelastic excitation on steam generator tube integrity.

(b) Westinghouse can sell support and defense of the thermal hydraulic analysis of secondary side flow field in the steam generator shell.

(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 information 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 additional information regarding stability ratios calculated for certain anti-vibration bar (AVB) support conditions for the San Onofre Nuclear Generating Station Unit 2 steam generators.

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).

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ENCLOSURE 3

SOUTHERN CALIFORNIA EDISON

RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION

REGARDING RESPONSE TO CONFIRMATORY ACTION LETTER

DOCKET NO. 50-361

TAC NO. ME 9727

Response to RAI 50

(NON-PROPRIETARY)

RAI 50

In Reference 8, p. 102 through 137, Figures 4-5 through 4-40 show local SR results. Please provide a tabulated summary of the results for [

]

RESPONSE

Note: RAI Reference 8 is Westinghouse Electric Company (WEC) document LTR-SGDA-12-36, "Flow-Induced Vibration and Tube Wear Analysis of the San Onofre Nuclear Generating Station Unit 2 Replacement Steam Generators Supporting Restart," Revision 3.

Figures 4-5 through 4-40 from RAI Reference 8 provided in-plane and out-of-plane stability ratios at 70% and 100% power for various support conditions. Each case represents a unique support condition. Every case has four associated SR maps: 100% power out-of-plane SR, 70% power out-of-plane SR, 100% power in-plane SR, 70% power in-plane SR. Out of the nine cases contained in Figures 4-5 through 4-40, five cases have support conditions of 5 or more missing AVBs.

The limiting tubes would not provide a good representation of the bundle since these tubes are all adjacent. To provide a meaningful comparison, the following tables provide a summary of the results following the format in MHI L5-04GA567 Rev 6, Tables 2.2-1 to 2.2-4. The nine representative tube locations used in this response are the same nine representative tube locations used in response to RAI 29.

Note: The SRs in Figures 4-5 through 4-40 and in Tables 1 – 5 (below) assume all tubes are active (in-service). Two tubes, R95 C85 and R100 C80, are plugged and stabilized (out-of-service).

Table 1 – Stability Ratio with 5 Consecutive AVBs Missing (Case 45)
B03, B04, B05, B06, and B07

Row	Column	70%		100% (No Plug)	
		Out-of-Plane	In-Plane	Out-of-Plane	In-Plane
80	70				
80	80				
95(*)	85(*)				
100	70				
100(*)	80(*)				
120	70				
120	80				
125	85				
138	84				

Note (*): Tube plugged and stabilized.

Table 2 – Stability Ratio with 5 Consecutive AVBs Missing (Case 46)
B04, B05, B06, B07, and B08

Row	Column	70%		100% (No Plug)	
		Out-of-Plane	In-Plane	Out-of-Plane	In-Plane
80	70				
80	80				
95(*)	85(*)				
100	70				
100(*)	80(*)				
120	70				
120	80				
125	85				
138	84				

Note (*): Tube plugged and stabilized.

Table 3 – Stability Ratio with 6 Consecutive AVBs Missing (Case 53)
B03, B04, B05, B06, B07, and B08

Row	Column	70%		100% (No Plug)	
		Out-of-Plane	In-Plane	Out-of-Plane	In-Plane
80	70				
80	80				
95(*)	85(*)				
100	70				
100(*)	80(*)				
120	70				
120	80				
125	85				
138	84				

Note (*): Tube plugged and stabilized.

Table 4 – Stability Ratio with 6 Consecutive AVBs Missing (Case 54)
B04, B05, B06, B07, B08, and B09

Row	Column	70%		100% (No Plug)	
		Out-of-Plane	In-Plane	Out-of-Plane	In-Plane
80	70				
80	80				
95(*)	85(*)				
100	70				
100(*)	80(*)				
120	70				
120	80				
125	85				
138	84				

Note (*): Tube plugged and stabilized.

Table 5 – Stability Ratio with 7 Consecutive AVBs Missing (Case 60)
B03, B04, B05, B06, B07, B08, and B09

Row	Column	70%		100% (No Plug)	
		Out-of-Plane	In-Plane	Out-of-Plane	In-Plane
80	70				
80	80				
95(*)	85(*)				
100	70				
100(*)	80(*)				
120	70				
120	80				
125	85				
138	84				

Note (*): Tube plugged and stabilized.

To directly compare Westinghouse in-plane SRs to those from L5-04GA567, Tables 2.2-1 through 2.2-4, the same support conditions must be used. In L5-04GA567, the number of consecutive missing AVBs start from AVB B01 (hot leg side). The following Tables 6 - 9 provide the Westinghouse in-plane SRs and are based on identical support conditions from L5-04GA567. The 70% power SRs for tubes R95 C85 and R100 C80 in Tables 6 - 9 are out-of-service SR values.

Table 6 – In-Plane Stability Ratio with 6 Consecutive AVBs Missing (Case 51)
B01 through B06

Row	Column	70%	100% (No Plug)
80	70		
80	80		
95(*)	85(*)		
100	70		
100(*)	80(*)		
120	70		
120	80		
125	85		
138	84		

Note (*): Tube plugged and stabilized.

Table 7 – In-Plane Stability Ratio with 8 Consecutive AVBs Missing (Case 64)
B01 through B08

Row	Column	70%	100% (No Plug)
80	70		
80	80		
95(*)	85(*)		
100	70		
100(*)	80(*)		
120	70		
120	80		
125	85		
138	84		

Note (*): Tube plugged and stabilized.

Table 8 – In-Plane Stability Ratio with 10 Consecutive AVBs Missing (Case 73)
B01 through B10

Row	Column	70%	100% (No Plug)
80	70		
80	80		
95(*)	85(*)		
100	70		
100(*)	80(*)		
120	70		
120	80		
125	85		
138	84		

Note (*): Tube plugged and stabilized.

Table 9 – In-Plane Stability Ratio with 12 Consecutive AVBs Missing (Case 78)

Row	Column	70%	100% (No Plug)
80	70		
80	80		
95(*)	85(*)		
100	70		
100(*)	80(*)		
120	70		
120	80		
125	85		
138	84		

Note (*): Tube plugged and stabilized.