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Proprietary Information
Withhold from Public Disclosure

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

January 17, 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 (RAIs 10 and 17)
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 December 26, 2012, Request for Additional Information Regarding Response to Confirmatory Action Letter, San Onofre Nuclear Generating Station, Unit 2

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 December 26, 2012 (Reference 3), the NRC issued Requests for Additional Information (RAIs) regarding the CAL response. Enclosure 2 of this letter provides the response to RAIs 10 and 17.

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 (Electric Power Research Institute), which sets forth the basis on which the information in Enclosure 2 may be withheld from public disclosure

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by the NRC and addresses with specificity the considerations listed by paragraph (b)(4) of 10 CFR 2.390. 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 Affidavits
2. Response to RAIs 10 and 17 (Proprietary)
3. Response to RAIs 10 and 17 (Non-proprietary)

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

ENCLOSURE 1

Notarized Affidavits

EPRI | ELECTRIC POWER RESEARCH INSTITUTE

January 14, 2013

Document Control Desk
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

Subject: Request for Withholding Values in Table "AOI Steam Generator Tube Leak Actions" in SONGS Response to NRC Request for Additional Information No. 10

Reference: *Steam Generator Management Program: PWR Primary-to-Secondary Leak Guidelines, Revision 4. EPRI, Palo Alto, CA: 2011. 1022832*

To Whom It May Concern:

This is a request under 10 C.F.R. §2.390(a)(4) that the U.S. Nuclear Regulatory Commission ("NRC") withhold from public disclosure the information identified in the enclosed Affidavit consisting of the commercial information owned by Electric Power Research Institute, Inc. ("EPRI") identified above (the "Table"). Copies of SONGS response to NRC RAI No. 10 and the Affidavit in support of this request are enclosed.

EPRI desires to disclose values in the Table in confidence as a means of exchanging technical information with the NRC. The values in the Table are not to be divulged to anyone outside of the NRC nor shall any copies be made of the values in the Table provided herein. EPRI welcomes any discussions and/or questions relating to the information enclosed.

If you have any questions about the legal aspects of this request for withholding, please do not hesitate to contact me at (704) 595-2732. Questions on the content of the Table should be directed to Helen Cothron of EPRI at (865) 773-4033.

Sincerely,

Steven M. Swilley
Senior Business Operations Manager

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ELECTRIC POWER RESEARCH INSTITUTE

AFFIDAVIT

Request for Withholding Values in Table "AOI Steam Generator Tube Leak Actions" from SONGS Response to NRC Request for Additional Information No. 10

Reference: *Steam Generator Management Program: PWR Primary-to-Secondary Leak Guidelines, Revision 4. EPRI, Palo Alto, CA: 2011. 1022832*

I, Steven M. Swilley, being duly sworn, depose and state as follows:

I am the Senior Business Operations Manager at Electric Power Research Institute, Inc. whose principal office is located at 1300 W WT Harris Blvd, Charlotte North Carolina ("EPRI") and I have been specifically delegated responsibility for the values in the above-listed Table that is sought under this Affidavit to be withheld (the "Table"). I am authorized to apply to the U.S. Nuclear Regulatory Commission ("NRC") for the withholding of the values in the Table on behalf of EPRI.

EPRI requests that the values in the Table be withheld from the public on the following bases:

Withholding Based Upon Privileged And Confidential Trade Secrets Or Commercial Or Financial Information:

a. The values in the Table are taken from the referenced report that is owned by EPRI and constitutes commercial information which has not been placed in the public domain by EPRI.

b. EPRI made a substantial economic investment to develop the values in the Table and, by prohibiting public disclosure, EPRI derives an economic benefit in the form of fees charged for the sale of the information. The values in the Table are entitled to the protection of the United States copyright laws. If the values in the Table were publicly available to consultants and/or other businesses providing services in the electric and/or nuclear power industry at no cost, these entities would be able to use the values in the Table for their own commercial benefit and profit and without expending the substantial economic resources required of EPRI to develop the values.

c. EPRI made a substantial investment of both money and employee hours over an extended period of time in the development of the values in the Table. As a result of such effort and cost, both in terms of dollars spent and dedicated employee time, the values in the Table are highly valuable to EPRI.

d. A public disclosure of the values in the Table would be highly likely to cause substantial harm to EPRI's competitive position and the ability of EPRI to sell the values in the Table both domestically and internationally. If a party does not purchase the referenced report from EPRI, it would require an investment of money, time and effort equivalent to that expended by EPRI for the party to duplicate the values in the Table.

I have read the foregoing and the matters stated herein are true and correct to the best of my knowledge, information and belief. I make this affidavit under penalty of perjury under the laws of the United States of America and under the laws of the State of California.

Executed at 1300 W WT Harris Blvd being the premises and place of business of Electric Power Research Institute, Inc.

Date: 1 / 14 / 2013

Steven M. Swilley

(State of North Carolina)
(County of Mecklenburg)

Subscribed and sworn to (or affirmed) before me on this 14th day of January, 2013, by Steven M. Swilley, proved to me on the basis of satisfactory evidence to be the person(s) who appeared before me.

Signature Deborah H. Rouse (Seal)

My Commission Expires 2nd day of April, 2016.

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 RAIs 10 and 17

(NON-PROPRIETARY)

RAI 10

Technical Specification (TS) 3.4.12.d allows 150 gallons per day primary to secondary leakage. The Return to Service Report (Enclosure 2 of Reference 1), Section 9.4.1 states, "The plant operating procedure for responding to a reactor coolant leak has been modified to require plant Operators to commence a reactor shutdown upon a valid indication of a primary to secondary SG tube leak at a level less than allowed by the plant's TSs. This procedure change requires earlier initiation of operator actions in response to a potential SG tube leak." Does this mean that a reactor shutdown would be commenced upon any valid indication of primary to secondary leakage? Provide a description of the action levels in the procedure. Discuss any additional actions, planned or taken, such as simulator testing, operator training, and/or any evaluations to assess potential impacts of the revised procedure.

RAI 17

Reference 1, Section 9.4.1, page 50 – Provide the procedural action levels/statements (for SO23-13-14, Reactor Coolant Leak).

RESPONSE

The following discussion provides the response to RAIs 10 and 17.

1. **Does this mean that a reactor shutdown would be commenced upon any valid indication of primary to secondary leakage?**

Yes, a reactor shutdown will be commenced upon a valid primary to secondary leak.

2. **Provide a description of the action levels in the procedure.**

The Abnormal Operating Instruction (AOI), "Reactor Coolant Leak" specifies actions to be taken in response to indications of a primary to secondary leak. The AOI includes standard actions consistent with Electric Power Research Institute (EPRI) guidelines and additional SONGS specific administrative actions. The table below summarizes the required actions in the AOI following a steam generator tube leak (SGTL). As shown on the table, the actions depend on the leak rate, rate of change of the leak, and time and availability of radiation monitors.

Summary of AOI Steam Generator Tube Leak Actions

SGTL RATE: (1 gpm = 1440 gpd)	**ACTION(S)*** (consistent with EPRI guidelines)
Leakage is [ ] **AND** increasing by [ ] OR Leakage is [ ]	1. INITIATE Attachments 1, 2 & 3 2. Concurrently COMMENCE shutdown to be[ ]per procedure, "Rapid Power Reduction" (RPR), Attachment for RPR at a rate of [ ]
Leakage is [ ] and the rate of change in leakage is increasing by [ ]	1. INITIATE Attachments 1, 2 & 3 2. Concurrently COMMENCE shutdown to be in [ ] per "Rapid Power Reduction" procedure, Attachment for RPR at a rate of [ ]
Leakage is [ ] sustained for [ ] **AND** increasing [ ]	1. INITIATE Attachments 1, 2 & 3 2. Concurrently COMMENCE a controlled shutdown to be in [ ] per procedure, "Power Operations," Attachment for Power Descension 3. Monitor [ ]
Any confirmed SG leakage	1. Contact Management 2. INITIATE Attachments 1, 2 & 3 3. [ ] 4. INITIATE a controlled shutdown per procedure, "Power Operations," Attachment for Power Descension, and be in [ ]

* Attachments 1 and 2 are used to calculate SG tube leakage using RE-7870 and RE-7818A, respectively. Attachment 3 is used to minimize contamination during a SG tube leak.

3. Discuss any additional actions, planned or taken, such as simulator testing, operator training, and/or any evaluations to assess potential impacts of the revised procedure.

SONGS Operators have received additional classroom and simulator training to enhance Operator response to a primary to secondary SGTL. The lessons learned from Operator response to the Unit 3 SGTL, simulator tests and the new detection methods (Argon 40 injection, Nitrogen 16 monitors) were incorporated into new training.

To capture lessons learned, the plant operators involved in the Unit 3 SGTL on January 31, 2012 were interviewed to identify strengths and improvement areas. The enhancements identified by this process were incorporated into AOIs, "Reactor Coolant Leak" and "Rapid Power Reduction."

The training department Licensed Operator Requalification group performed classroom training sessions with licensed operators on the use of methods and techniques for detection of leaks using Argon 40 injection and Nitrogen 16 monitors, calculation of low level tube leak events, and operation at reduced power. In the classroom, AOIs "Reactor Coolant Leak" and "Rapid Power Reduction" were covered along with Operations Standard Manuals which were revised to capture new steam generator tube leak practices.

Simulator scenarios were conducted using the revised AOIs, "Reactor Coolant Leak" and "Rapid Power Reduction," which included the following:

- SGTL of 50 gpd in Mode 4 at normal operating pressure (NOP)
- Steam Generator Tube Rupture (SGTR) of 300 gpm in Mode 3 at NOP and normal operating temperature (NOT)
- SGTR of 12 gpm in Mode 2 at NOP/NOT
- SGTR of 355 gpm in Mode 1, 69% power

Training based on the Unit 3 SGTL event and plant upgrades was completed and is documented in the Nuclear Training Division Crew Performance Monitoring System.

An additional SGTL Simulator session for Licensed Operator Continuing Training will be completed prior to restart of Unit 2. This training session will include a small SGTL and use the AOI which specifies shutting down upon any confirmed SGTL. Additional Just-In-Time classroom training for operators will be completed prior to plant startup.