



**Pacific Gas and
Electric Company®**

Attachments 1 and 2 to the Enclosure contain ~~Proprietary Information~~ –
~~Withhold Under 10 CFR 2.390~~

Barry S. Allen
Site Vice President

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June 11, 2014

PG&E Letter DCL-14-051

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

10 CFR 50.55a

Docket No. 50-323, OL-DPR-82
Diablo Canyon Unit 2
Submittal of Supplemental Analysis for Inservice Inspection Program Relief Request
SWOL-REP-1 U2

Reference: 1. PG&E Letter DCL-14-028, "Inservice Inspection Program Relief Request SWOL-REP-1 U2 for Approval of an Alternative to the ASME Code, Section XI, for Preemptive Full Structural Weld Overlays," dated April 7, 2014 (ML14101A246)

Dear Commissioners and Staff:

In Reference 1, Pacific Gas and Electric Company (PG&E) submitted Relief Request SWOL-REP-1 U2 for approval of an alternative to the ASME Code, Section XI, Repair/Replacement rules as applied to the Diablo Canyon Power Plant Unit 2 pressurizer structural weld overlays. PG&E committed to submit the supplemental analysis that evaluated the reported flaw sizes with additional margin to account for possible flaw sizing variations that are associated with the repeatability of manual ultrasonic examination results.

Attachments 1 and 2 to the Enclosure contain AREVA calculations associated with the supplemental analysis, which are proprietary to AREVA. Attachment 3 includes AREVA's affidavit for the calculations mentioned above. The affidavit is signed by AREVA, the owner of the information. The affidavit sets forth the basis on which the AREVA proprietary information contained in Attachments 1 and 2 may be withheld from public disclosure by the Commission, and it addresses with specificity the considerations listed in paragraph (b)(4) of 10 CFR 2.390 of the Commission's regulations. PG&E requests that the AREVA proprietary information be withheld from public disclosure in accordance with 10 CFR 2.390. Correspondence with respect to the AREVA affidavit or the AREVA proprietary information provided in Attachments 1 and 2 should reference the AREVA Affidavit and be addressed to Gayle F. Elliott, Product Licensing Manager, AREVA NP, 3315 Old Forest Road, Lynchburg, VA 24501.

Attachments 1 and 2 to the Enclosure contain ~~Proprietary Information~~
When separated from Attachments 1 and 2, this document is decontrolled.
A member of the STARS (Strategic Teaming and Resource Sharing) Alliance

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Attachments 4 and 5 to the Enclosure contain AREVA calculations that are non-proprietary versions of AREVA calculations in Attachments 1 and 2.

This letter satisfies commitment number 1 listed in Attachment 16 to the Enclosure of Reference 1. This communication does not contain regulatory commitments (as defined by NEI 99-04).

If you have any questions, or require additional information, please contact Tom Baldwin at (805) 545-4720.

Sincerely,

A handwritten signature in black ink that reads 'Barry S. Allen'.

Barry S. Allen
Site Vice President

RNTT/4231/50033145

Enclosure

cc: Diablo Distribution
cc/enc: Peter J. Bamford, NRC Project Manager
Marc L. Dapas, NRC Region IV Administrator
Thomas R. Hipschman, NRC Senior Resident Inspector
Gonzalo L. Perez, Branch Chief, California Department of Public Health
State of California, Pressure Vessel Unit

**Submittal of Supplemental Analysis for Inservice Inspection Program
Relief Request SWOL-REP-1 U2**

In Pacific Gas and Electric (PG&E) Letter DCL-14-028, "Inservice Inspection Program Relief Request SWOL-REP-1 U2 for Approval of an Alternative to the ASME Code, Section XI, for Preemptive Full Structural Weld Overlays," dated April 7, 2014, PG&E submitted a Relief Request SWOL-REP-1 U2 for NRC approval.

This letter submits supplemental AREVA calculations that consider postulated flaw sizing variations of the previously reported and analyzed laminar flaws in the Diablo Canyon Power Plant (DCPP) Unit 2 pressurizer structural weld overlays (SWOLs). The attached calculations establish a revised axial length size criteria for the previously identified flaws that may be used by PG&E to accept findings in future inservice inspections (ISIs) and allow for possible flaw sizing variations that are associated with the repeatability of manual ultrasonic examination results.

This supplemental analysis evaluated an additional postulated 0.125 inch of axial length on either side (0.25 inch total additional length) beyond the boundaries of the laminar flaws previously reported and analyzed. The supplemental laminar flaw growth evaluations were performed considering the design transients for the 38-year design life of the SWOLs.

PG&E intends to use the revised axial lengths of the laminar indications analyzed herein as the acceptance criteria for the previously identified flaws in future ISI examinations of the DCPP Unit 2 pressurizer SWOLs. Flaw sizes that exceed the revised axial lengths will not be accepted without further analysis and review by the NRC.

Safety/Relief Nozzles A, B and C: Laminar Flaw Evaluations

Attachment 1 to the Enclosure contains AREVA Proprietary Calculation No. 32-9215965-002, "Diablo Canyon Unit 2 Pressurizer Safety/Relief Nozzles Laminar/Planar Flaw Analysis." In this revision, Appendices A, B, and C are included to present the analysis associated with the postulated larger flaw sizes in the safety relief nozzles. Thermal and pressure stress transient results along the representative path lines of the laminar flaws, used in the fracture mechanics evaluation, are summarized in Appendix A. Similarly, weld residual stresses to support flaw evaluations with the postulated larger laminar indication sizes are summarized in Appendix B. Finally, the flaw evaluation results from this analysis that considers the larger flaw sizes are summarized in Appendix C.

The results of the flaw growth analysis and the final flaw area calculations after a 38-year design life are tabulated in Table C-1 and Table C-2 respectively in Appendix C of the document. The results of the minimum required overlay length evaluation are summarized in Table C-3 in Appendix C. The supplemental analysis results presented in Tables C-1, C-2, and C-3, confirm that the SWOLs installed on the three safety relief nozzles continue to meet the overlay length requirement of NB-3227.2 when the larger laminar flaws sizes described previously are considered. The analysis concluded that the postulated larger flaw sizes will not impact the integrity of the safety relief SWOLs for 38 years of plant operation.

Spray Nozzle: Laminar Flaw Evaluations

Attachment 2 to the Enclosure contains AREVA Proprietary Calculation No. 32-9213780-002, "Diablo Canyon Unit 2 Pressurizer Spray Nozzle Laminar Flaw Analysis." In this revision, Appendix A is included to present the analysis associated with the postulated larger flaw sizes in the spray nozzle.

The results of the flaw growth analysis and the final flaw area calculations after a 38-year design life are tabulated in Table A-1 and Table A-2 respectively in Appendix A of the document. The results of the minimum required overlay length evaluation are summarized in Table A-3 in Appendix A.

The supplemental analysis results presented in Tables A-1, A-2, and A-3 confirm that the SWOL installed on the spray nozzle continues to meet the overlay length requirement of NB-3227.2 when the larger laminar flaw sizes described previously are considered. The analysis concluded that the postulated larger flaw sizes will not impact the integrity of the spray nozzle SWOL for 38 years of plant operation.

ATTACHMENTS

Attachment 1: AREVA Calculation No. 32-9215965-002: Diablo Canyon Unit 2 Pressurizer Safety/Relief Nozzles Laminar/Planar Flaw Analysis (Proprietary)

Attachment 2: AREVA Calculation No. 32-9213780-002: Diablo Canyon Unit 2 Pressurizer Spray Nozzle Laminar Flaw Analysis (Proprietary)

Attachment 3: AREVA Affidavit for AREVA Calculations (Proprietary)

Attachment 4: AREVA Calculation No. 32-9221080-001: Diablo Canyon Unit 2 Pressurizer Safety/Relief Nozzles Laminar/Planar Flaw Analysis—Non Proprietary

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Attachment 5: AREVA Calculation No. 32-9221082-001: Diablo Canyon Unit 2
Pressurizer Spray Nozzle Laminar Flaw Analysis – Non
Proprietary

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Attachment 3
PG&E Letter DCL-14-051

**AREVA Affidavit for
AREVA Calculations (Proprietary)**

A F F I D A V I T

COMMONWEALTH OF VIRGINIA)
)
 CITY OF LYNCHBURG) ss.

1. My name is Gayle F. Elliott. I am Manager, Product Licensing, for AREVA Inc. (AREVA) and as such I am authorized to execute this Affidavit.

2. I am familiar with the criteria applied by AREVA to determine whether certain AREVA information is proprietary. I am familiar with the policies established by AREVA to ensure the proper application of these criteria.

3. I am familiar with the AREVA information contained in Calculation Summary Sheet 32-9215965-002, entitled, "Diablo Canyon Unit 2 Pressurizer Safety/Relief Nozzles Laminar/Planar Flaw Analysis," dated May 2014, and Calculation Summary Sheet 32-9213780-002, entitled, "Diablo Canyon Unit 2 Pressurizer Spray Nozzle Laminar Flaw Analysis," dated May 2014, and referred to herein as "Documents." Information contained in these Documents has been classified by AREVA as proprietary in accordance with the policies established by AREVA for the control and protection of proprietary and confidential information.

4. These Documents contain information of a proprietary and confidential nature and is of the type customarily held in confidence by AREVA and not made available to the public. Based on my experience, I am aware that other companies regard information of the kind contained in these Documents as proprietary and confidential.

5. These Documents have been made available to the U.S. Nuclear Regulatory Commission in confidence with the request that the information contained in these Documents be withheld from public disclosure. The request for withholding of proprietary information is

made in accordance with 10 CFR 2.390. The information for which withholding from disclosure is requested qualifies under 10 CFR 2.390(a)(4) "Trade secrets and commercial or financial information."

6. The following criteria are customarily applied by AREVA to determine whether information should be classified as proprietary:

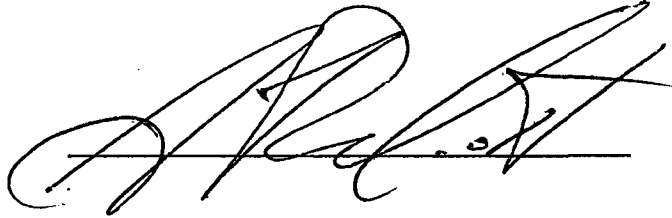
- (a) The information reveals details of AREVA's research and development plans and programs or their results.
- (b) Use of the information by a competitor would permit the competitor to significantly reduce its expenditures, in time or resources, to design, produce, or market a similar product or service.
- (c) The information includes test data or analytical techniques concerning a process, methodology, or component, the application of which results in a competitive advantage for AREVA.
- (d) The information reveals certain distinguishing aspects of a process, methodology, or component, the exclusive use of which provides a competitive advantage for AREVA in product optimization or marketability.
- (e) The information is vital to a competitive advantage held by AREVA, would be helpful to competitors to AREVA, and would likely cause substantial harm to the competitive position of AREVA.

The information in these Documents is considered proprietary for the reasons set forth in paragraphs 6(c) and 6(d) above.

7. In accordance with AREVA's policies governing the protection and control of information, proprietary information contained in these Documents has been made available, on a limited basis, to others outside AREVA only as required and under suitable agreement providing for nondisclosure and limited use of the information.

8. AREVA policy requires that proprietary information be kept in a secured file or area and distributed on a need-to-know basis.

9. The foregoing statements are true and correct to the best of my knowledge, information, and belief.

A large, stylized handwritten signature in black ink, written over a horizontal line.

SUBSCRIBED before me this 30th
day of May, 2014.

A handwritten signature in black ink, written over a horizontal line.

Sherry L. McFaden
NOTARY PUBLIC, COMMONWEALTH OF VIRGINIA
MY COMMISSION EXPIRES: 10/31/14
Reg. # 7079129

