



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

November 16, 2010

LICENSEE: Arizona Public Service Company

FACILITY: Palo Verde Nuclear Generating Station, Units 1, 2, and 3

SUBJECT: SUMMARY OF TELEPHONE CONFERENCE CALLS HELD ON OCTOBER 22 AND NOVEMBER 3, 2010, BETWEEN THE U.S. NUCLEAR REGULATORY COMMISSION AND ARIZONA PUBLIC SERVICE COMPANY, CONCERNING DRAFT REQUEST FOR ADDITIONAL INFORMATION PERTAINING TO THE PALO VERDE NUCLEAR GENERATING STATION, UNITS 1, 2, AND 3, LICENSE RENEWAL APPLICATION

The U.S. Nuclear Regulatory Commission (the staff) and representatives of Arizona Public Service Company (the applicant) held telephone conference calls on October 22 and November 3, 2010, to discuss and clarify the staff's draft request for additional information (RAI) concerning the Palo Verde Nuclear Generating Station, Units 1, 2, and 3, license renewal application. The telephone conference call was useful in clarifying the intent of the staff's draft RAI.

Enclosure 1 provides a listing of the participants and Enclosure 2 contains a listing of the draft RAI discussed with the applicant, including a brief description on the status of the items.

The applicant had an opportunity to comment on this summary.

A handwritten signature in black ink, appearing to read "Lisa M. Regner".

Lisa M. Regner, Sr. Project Manager
Projects Branch 2
Division of License Renewal
Office of Nuclear Reactor Regulation

Docket Nos. 50-528, 50-529, and 50-530

Enclosures:
As stated

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**TELEPHONE CONFERENCE CALL
PALO VERDE NUCLEAR GENERATING STATION, UNITS 1, 2, AND 3
LICENSE RENEWAL APPLICATION**

**LIST OF PARTICIPANTS
OCTOBER 22, 2010**

PARTICIPANTS

Lisa Regner
Allen Hiser
Rachel Vaucher
Ken Karwoski
Andrew Johnson
Angela Krainik
Edison Fernandez
Douglas Hansen
Warren Leaverton
Randal Boyd
Eric Blocher

AFFILIATIONS

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Strategic Teaming and Resource Sharing (STARS) Alliance

**LIST OF PARTICIPANTS
NOVEMBER 3, 2010**

PARTICIPANTS

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AFFILIATIONS

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STARS

**DRAFT REQUESTS FOR ADDITIONAL INFORMATION
PALO VERDE NUCLEAR GENERATING STATION, UNITS 1, 2, AND 3
LICENSE RENEWAL APPLICATION**

**OCTOBER 22, 2010
NOVEMBER 3, 2010**

The U.S. Nuclear Regulatory Commission (the staff) and representatives of Arizona Public Service Company (the applicant) held telephone conference calls on October 22 and November 3, 2010, to discuss and clarify the following draft request for additional information (RAI) concerning the Palo Verde Nuclear Generating Station (Palo Verde), Units 1, 2, and 3, license renewal application (LRA).

1. The Updated Final Safety Analysis Report (UFSAR), Section 1.2.3.3, states that a vertical divider plate separates the inlet and outlet plenums in the lower head of the steam generators (SGs), but no information about the materials of the divider plate assembly, nor its junction to the lower head and to the tubesheet was found in the UFSAR nor the LRA. Clarify how the divider plate is assembled to the lower head and to the tubesheet and what are the materials of this divider plate and potential associated welds? If this information is in the UFSAR, please specify its location.
2. Regarding LRA item 3.1.1-35, the applicant states that it's not applicable because they have recirculating SGs and the Generic Aging Lessons Learned (GALL) Report item is for once-through SGs. However, this aging effect is applicable also for recirculating SGs tube-to-tubesheet welds, when SG tubes are Alloy 690TT (which is the case for Palo Verde) and the tubesheet cladding is Alloy 600. In such a configuration, the weld could have insufficient chromium content to prevent primary water stress corrosion cracking (PWSCC). If it is Alloy 600, describe how PWSCC is managed in the tube-to-tubesheet welds.
3. LRA Table 3.1.2-4 does not include an item addressing GALL item IV.D1-17, which corresponds to ligament cracking due to corrosion in steel tube support plates. However, in LRA Table 3.1.2-4, the applicant addresses GALL item IV.D1-19, which corresponds to SG tube denting due to corrosion of carbon steel tube support plate. In LRA Section B2.1.8, the applicant also states that the tube support system is similar to the original design, and like the original design is fabricated from 409 ferritic stainless steel. Explain this apparent inconsistency.

Discussion:

The staff indicated that if there is nothing on the docket that indicates that the material susceptible to PWSCC is isolated from the primary coolant, such information would need to be submitted formally by the applicant.

Following discussion, the staff modified the second question as follows:

2. Regarding LRA item 3.1.1-35, the applicant states that it's not applicable because they have recirculating SGs and the GALL Report item is for once-through SGs. However, this aging effect is applicable also for recirculating SGs tube-to-tubesheet welds with

ENCLOSURE 2

tubesheet cladding of Alloy 600 and SG tubes of Alloy 690TT (which is the case for Palo Verde). In such a configuration, the weld may have insufficient chromium content to prevent PWSCC. If the tubesheet cladding is Alloy 600, describe how PWSCC is managed for aging in the tube-to-tubesheet welds.

The applicant stated that it understood the questions and would respond to the staff's concerns.

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The applicant had an opportunity to comment on this summary.

/RA/

Lisa M. Regner, Sr. Project Manager
Projects Branch 2
Division of License Renewal
Office of Nuclear Reactor Regulation

Docket Nos. 50-528, 50-529, and 50-530

Enclosures:
As stated

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NAME	LRegner	YEdmonds*	DWrona	LRegner
DATE	11/15/10	11/04/10	11/15/10	11/16/10

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Memorandum to Arizona Public Service Company from L. Regner dated November 16, 2010

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