



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

October 15, 2010

LICENSEE: Arizona Public Service Company  
FACILITY: Palo Verde Nuclear Generating Station, Units 1, 2, and 3  
SUBJECT: SUMMARY OF TELEPHONE CONFERENCE CALL HELD ON  
JULY 8, 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 a telephone conference call on July 8, 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, Senior 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  
JULY 8, 2010**

**PARTICIPANTS**

Lisa Regner

William Holston

James Gavula

Angela Krainik

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Robert Lee

Mark Hypse

Eric Blocher

**AFFILIATIONS**

U.S. Nuclear Regulatory Commission (NRC)

NRC

NRC

Arizona Public Service Company (APS)

APS

APS

APS

Strategic Teaming and Resource Sharing (STARS) Alliance

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

**JULY 8, 2010**

The U.S. Nuclear Regulatory Commission (the staff) and representatives of Arizona Public Service Company (the applicant) held a telephone conference call on July 8, 2010, to discuss and clarify the following draft request for additional information (RAI) concerning the Palo Verde Nuclear Generating Station (PVNGS), Units 1, 2, and 3, license renewal application (LRA).

**DRAFT RAI 3.3.1-1**

Background

Standard Review Plan-License Renewal (SRP-LR) Table 3.3.1, item 3.3.1.75 indicates that elastomer components exposed to raw water may undergo hardening and loss of strength due to elastomer degradation, and loss of material due to erosion. The GALL Report recommends that this aging effect may be managed by the Open-Cycle Cooling Water System.

Issue

LRA Table 3.3.1, item 3.3.1.75 indicates that aging of elastomer components exposed to raw water is not applicable because PVNGS has no in-scope elastomer components exposed to raw water in the open-cycle cooling water systems. Staff examination of the LRA identified the following items which could be classified as elastomeric components exposed to raw water:

Table 3.3.2-7 identifies PVC components and Table 3.3.2-22 identifies polyethylene components. In both cases, the tables cite generic Note F indicating that the materials are not in the GALL Report and state that there are no aging effects requiring management. Although the LRA states that PVC is relatively unaffected by water, there are no further bases provided to justify that there are no aging effects requiring management for PVC or polyethylene. The staff was specifically concerned about the loss of material due to erosion.

Tables 3.3.2-22 and 3.3.2-30 indicate that the loss of material for carbon steel pipe with elastomer linings in raw water are to be managed through the Fire Water System Program and the Inspection of Internal Surfaces in Miscellaneous Piping and Ducting Components Program, respectively. Since the item numbers cited in the LRA do not specifically address the loss of material for the elastomer, it was not clear to the staff that the aging management programs (AMPs) being proposed would adequately manage the loss of material for the elastomer lining. Although the cited AMPs addressed pressure boundary and leakage boundary, the potential consequences of the degraded elastomer lining material in the associated systems was not addressed.

ENCLOSURE 2

Request

Provide a basis for why these components, or other elastomer components exposed to raw water in the auxiliary system, are appropriately being managed for aging during the period of extended operation.

*Discussion: the applicant stated that they understood the question and would respond.*

**DRAFT RAI 3.3.2.2.4-X**

Background

SRP-LR Section 3.3.2.2.4, Cracking due to Stress Corrosion Cracking and Cyclic Loading, item 1, recommends further evaluation of stainless steel non-regenerative heat exchanger components exposed to treated borated hot water in the chemical and volume control system. The SRP-LR states that the effectiveness of the Water Chemistry Control Program should be verified to ensure cracking is not occurring. The SRP-LR also states that an acceptable verification program includes temperature and radioactivity monitoring of the shell side water, and eddy current testing of the tubes.

Issue

LRA Section 3.3.2.2.4.1, stated that the Water Chemistry and One-Time Inspection Programs will be used to manage cracking due to stress corrosion cracking (SCC) and cyclic loading for the stainless steel chemical volume control system letdown (non-regenerative) heat exchanger components exposed to treated borated water. The LRA also stated that temperature and radioactivity of the shell-side water will be monitored by installed instrumentation. The LRA further stated that, in lieu of the SRP-LR recommendation for eddy current testing of heat exchanger tubes, the One-Time Inspection Program was selected. However, the LRA did not indicate the nondestructive examination methodology that would be utilized as an alternative to eddy current testing of the heat exchanger tubes.

Request

- 1) Provide the nondestructive examination method that will be utilized in the one-time inspection program, in lieu of eddy-current testing of the non-regenerative heat exchanger tubes.
- 2) Will the nondestructive examination be performed on the non-regenerative heat exchanger tubes or will an inspection of an alternate component be credited for the one-time inspection?
- 3) If an alternate component will be credited, provide bases for the effectiveness of this approach, based on plant-specific or industry operating experience, to detect SCC in these heat exchanger tubes.

*Discussion: the applicant stated that they understood the question and would respond.*

October 15, 2010

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*/RA/*

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

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NAME	LRegner	YEdmonds	DWrona	LRegner
DATE	10/04/10	7/23/10	10/15/10	10/15/10

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Memorandum to Arizona Public Service Company from Lisa M. Regner dated October 15, 2010

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