



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

May 20, 2010

Mr. Randall K. Edington  
Executive Vice President Nuclear/  
Chief Nuclear Officer  
Mail Station 7602  
Arizona Public Service Company  
P.O. Box 52034  
Phoenix, AZ 85072-2034

SUBJECT: PALO VERDE NUCLEAR GENERATING STATION, UNIT 3 - REVIEW OF THE  
2009 STEAM GENERATOR TUBE INSPECTIONS DURING REFUELING  
OUTAGE 14 (TAC NO. ME2651)

Dear Mr. Edington:

By letter dated November 18, 2009 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML093310442), Arizona Public Service Company (the licensee), submitted the results of the 2009 steam generator (SG) tube inspections performed during refueling outage 14 at Palo Verde Nuclear Generating Station, Unit 3 (PVNGS 3). In addition, the licensee provided clarifying information in an e-mail to the U.S. Nuclear Regulatory Commission (NRC) staff dated February 12, 2010 (ADAMS Accession No. ML101380587).

The NRC staff has completed its review of the submittal and concludes that the licensee provided the information required by the PVNGS 3 technical specifications. No additional follow-up is required at this time. The staff's review is enclosed. If you have any questions, please contact me at (301) 415-4032 or via e-mail at [randy.hall@nrc.gov](mailto:randy.hall@nrc.gov).

Sincerely,

A handwritten signature in black ink that reads "James R. Hall". The signature is written in a cursive style with a large, stylized "J" and "H".

James R. Hall, Senior Project Manager  
Plant Licensing Branch IV  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Docket No. STN 50-530

Enclosure:  
As stated

cc w/encl: Distribution via Listserv

STAFF EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO RESULTS OF 2009 STEAM GENERATOR TUBE INSPECTIONS  
PERFORMED DURING REFUELING OUTAGE 14  
PALO VERDE NUCLEAR GENERATION STATION, UNIT 3  
DOCKET NO. STN 50-530

By letter dated November 18, 2009 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML093310442), Arizona Public Service Company (the licensee) submitted information summarizing the results of the 2009 steam generator (SG) tube inspections at the Palo Verde Nuclear Generating Station, Unit 3 (PVNGS 3). These inspections were performed during the PVNGS 3 refueling outage 14 (U3R14). In addition, the licensee provided clarifying information in an e-mail to the U.S. Nuclear Regulatory Commission (NRC) staff dated February 12, 2010 (ADAMS Accession No. ML101380587).

PVNGS 3 has two replacement SGs manufactured by Ansaldo. Each SG has 12,580 thermally treated Alloy 690 tubes with an outside diameter of 0.75 inches and a wall thickness of 0.042 inches. Ferritic stainless steel egg crate tube supports, diagonal bars, and vertical straps support the tubes at various locations. This was the first inservice inspection for the replacement SGs since they were installed during refueling outage 13 in the fall 2007.

The licensee provided the scope, extent, methods, and results of its SG tube inspections in the documents referenced above. In addition, the licensee described corrective actions (i.e., tube plugging) taken in response to the inspection findings.

In the e-mail dated February 12, 2010, the licensee stated that Foreign Object Search and Retrieval was the only secondary side inspection performed on its SGs during U3R14. Additionally, the licensee clarified the purpose of the rotating probe inspections that were listed in the bottom four rows of Table 1 of the submittal dated November 18, 2009. These rotating probe inspections were performed as a follow-up to bobbin coil examinations, including bobbin I-codes, wear, manufacturer burnishing marks, dents, and possible loose parts examinations. Rotating coil inspections were also performed in the U-bend region of rows 1 through 4 in both SGs.

Based on a review of the information provided, the NRC staff concludes that the licensee provided the information required by its technical specifications. In addition, the staff concludes that there are no technical issues that warrant follow-up action at this time since the inspections appear to be consistent with the objective of detecting potential tube degradation and that inspection results appear to be consistent with industry operating experience at similarly designed and operated units.

Enclosure

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/ra/

James R. Hall, Senior Project Manager  
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ADAMS Accession No. ML101340039

\*Concurrence by Memo

OFFICE	NRR/LPL4/PM	NRR/LPL4/LA	NRR/CSGB/BC	NRR/LPL4/BC	NRR/LPL4/PM
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