



UNITED STATES
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

October 2, 1997

Mr. James M. Levine
Executive Vice President, Nuclear
Arizona Public Service Company
Post Office Box 53999
Phoenix, Arizona 85072-3999

SUBJECT: REQUEST FOR INFORMATION REGARDING MONITORING AND OPERATIONAL
ASSESSMENT OF STEAM GENERATORS FOR PALO VERDE UNIT 2, AND
CONTINUED OPERABILITY OF STEAM GENERATORS FOR PALO VERDE
UNITS 1 AND 3

Dear Mr. Levine:

On September 25 and 30, 1997, Arizona Public Service (APS) briefed the NRC staff on the recent steam generator (SG) tube eddy current (EC) inspection results at Palo Verde Unit 2 (PV-2). The NRC staff requests APS to respond to the following questions pertaining to the condition monitoring and operational assessment of the steam generators for PV-2 and continued operability of the steam generators for Units 1 and 3.

U-bend Indications

During the previous PV-2 outage, APS used a plus point probe to inspect the Row 1 and 2 U-bends. APS reported at least two indications that were dispositioned as due to "geometry" and thus the affected tubes were returned to service. During the current refueling outage, APS reported crack-like indications in these same tubes; one of which was 100 percent throughwall.

1. Discuss the basis for the APS conclusion that for the past operating cycle, PV-2 was within its licensing basis with respect to the leakage and structural integrity of the U-bend indications. Include, at a minimum, a discussion of the insitu pressure test results, EC evaluations, and engineering analyses.
2. Provide the basis for dispositioning the U-bend indications as due to "geometry" in the prior outage. Include in the discussion a description of the EC signals as well as the results of the "look backs" that supported the "geometry" disposition. Include a discussion of the APS plans to address this issue in terms of future EC inspections of the SG tubes.
3. Based on the U-bend EC inspection results, provide the basis for the APS conclusion that PV-2 is safe to operate for a full cycle. Provide the basis for the APS conclusion that Units 1 and 3 are safe to continue operating given similar U-bend "geometry" indications have been reported in those units.



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October 2, 1997

Batwing-Stay Cylinder Wear

During the current Unit 2 refueling outage, APS identified the deepest batwing wear indication at 70 percent throughwall.

4. Discuss the APS decision to not insitu pressure test or pull the tube with the indication to ensure adequate leakage and structural integrity over the past operating cycle was maintained. Include, at a minimum, a discussion of the basis for assigning an EC uncertainty value of 3 to 4 percent.
5. Based on the batwing-stay cylinder wear inspection results, provide the basis for the APS conclusion that PV-2 is safe to operate for a full cycle. Provide the basis for the APS conclusion that Units 1 and 3 are safe to continue operating given similar batwing-stay cylinder wear may exist in those units.

Please respond to this request for information within 30 days from the date of this letter. If you have any questions, please contact me at (301) 415-1362.

Sincerely,

Original Signed By

Kristine M. Thomas, Project Manager
Project Directorate IV-2
Division of Reactor Projects - III/IV
Office of Nuclear Reactor Regulation

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

cc: See next page

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Kristine M. Thomas

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Project Directorate IV-2
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cc: See next page

Mr. James M. Levine

- 3 -

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