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

SUBJECT:

REQUEST FOR ADDITIONAL INFORMATION REGARDING PROPOSED TECHNICAL SPECIFICATION AMENDMENT FOR STEAM GENERATOR TUBE SLEEVING FOR THE PALO VERDE NUCLEAR GENERATING STATION (TAC NOS. M98920, M98921 AND

M98922)

Dear Mr. Levine:

By letter dated May 23, 1997, Arizona Public Service Company submitted a proposed Technical Specification (TS) amendment for the Palo Verde Nuclear Generating Station (PVNGS) that would allow the installation of tube sleeves designed by ABB-Combustion Engineering as an alternative to plugging defective steam generator tubes at PVNGS. The design, qualification, and installation of the sleeves are described in the ABB-Combustion Engineering topical report CEN-630-P, Revision 1 (November 1996), "Repair of 3/4 inch 0.D. Steam Generator Tubes Using Leak Tight Sleeves." The staff has reviewed the submittal and has determined that additional information, as discussed in the enclosure, is needed to complete its review.

To assist the staff in completing its review of the application, please respond in writing to this request for additional 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

Request for Additional

Information

cc w/encl: See next page

Enclosure:

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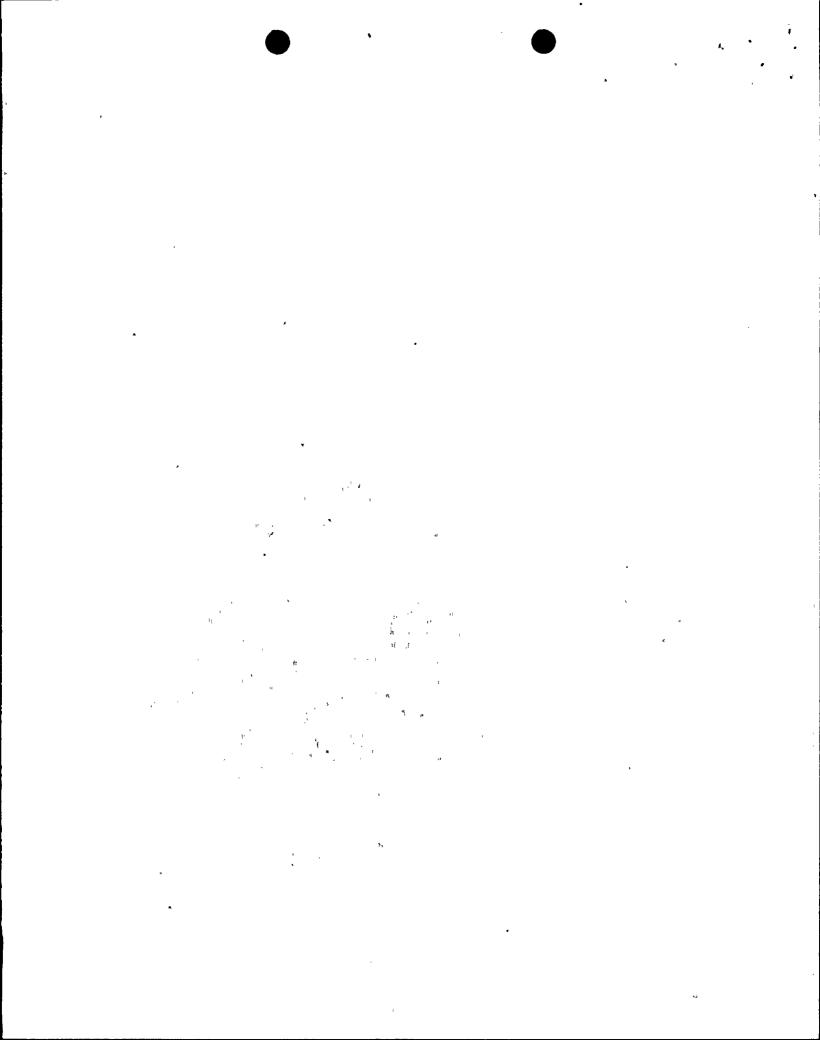
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cc w/encl: Mr. Steve Olea Arizona Corporation Commission 1200 W. Washington Street Phoenix, Arizona 85007

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Chairman, Board of Supervisors ATTN: Chairman 301 W. Jefferson, 10th Floor Phoenix. Arizona 85003

Mr. Aubrey V. Godwin, Director Arizona Radiation Regulatory Agency 4814 South 40 Street Phoenix, Arizona 85040

Ms. Angela K. Krainik, Manager Nuclear Licensing Arizona Public Service Company P.O. Box 52034 Phoenix, Arizona 85072-2034

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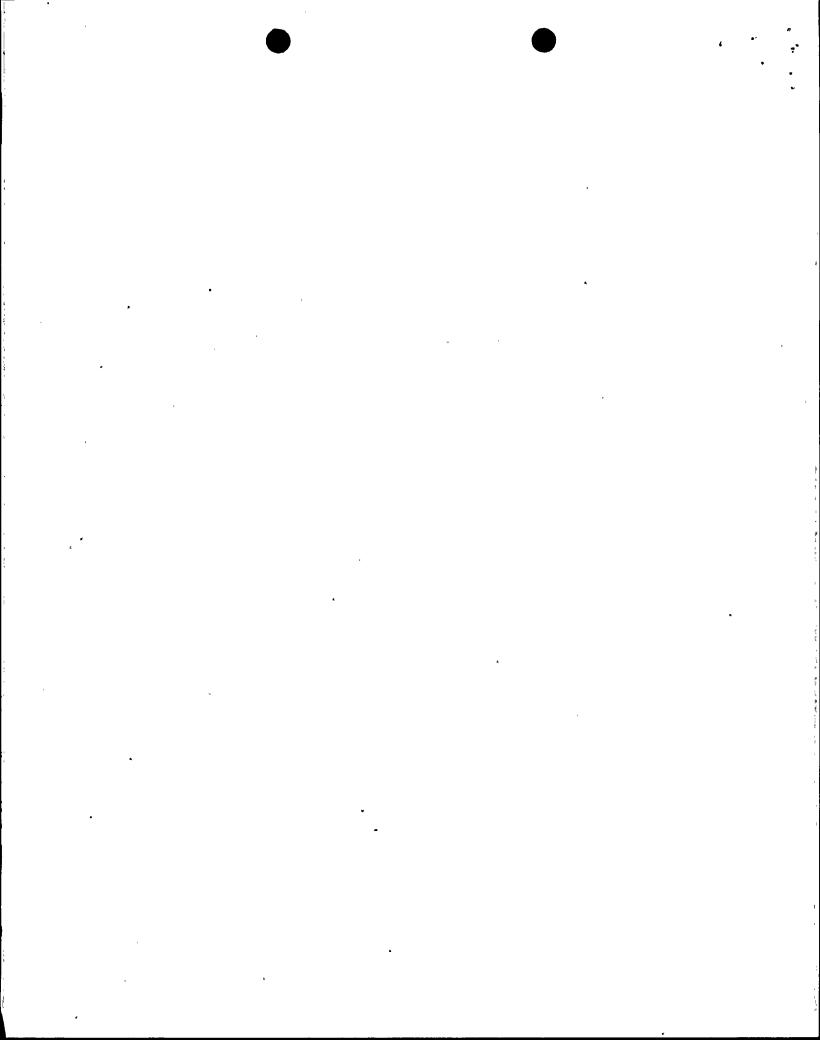
Mr. Robert Burt Los Angeles Department of Water & Power Southern California Public Power Authority 111 North Hope Street, Room 1255-B Los Angeles, California 90051

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Mr. Robert Henry Salt River Project 6504 East Thomas Road Scottsdale, Arizona 85251

Terry Bassham, Esq. General Counsel El Paso Electric Company 123 W. Mills El Paso, Texas 79901



## REQUEST FOR ADDITIONAL INFORMATION

## REVIEW OF LICENSE AMENDMENT REGARDING

## SLEEVING OF STEAM GENERATOR TUBES

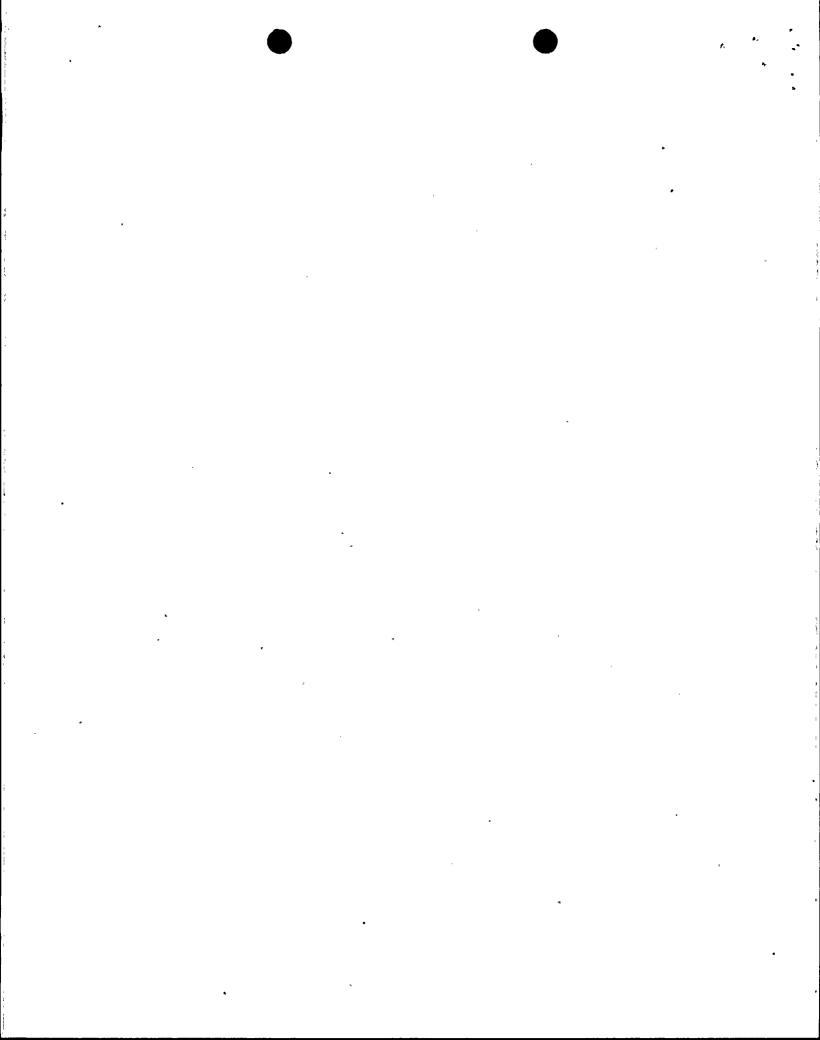
## PALO VERDE NUCLEAR GENERATING STATION, UNITS 1, 2 AND 3

By letter dated May 23, 1997, Arizona Public Service Company (APS) submitted for staff review a request for a technical specification (TS) amendment to allow the installation of tube sleeves as an alternative to plugging defective steam generator tubes at Palo Verde Units 1, 2, and 3. The submittal includes a proposed revision to the TS to allow steam generator tube repair using leak tight sleeves designed by ABB-Combustion Engineering (CE). The design, qualification, and installation of the sleeves are described in the ABB-CE topical report, 'Repair of 3/4" O.D. Steam Generator Tubes Using Leak Tight Sleeves,' CEN-630-P, Revision 1, November 1996. In order to complete its review, the staff requests the following additional information:

1. The proposed TS changes describe eddy current inspection criteria for steam generator (SG) tubes without particular reference to sleeve inspections. Without explicit inspection criteria in the TS, the requirements for the initial sample scope and subsequent expansion criteria for sleeve inspections would be based on existing TS requirements (e.g., 3% initial sample scope). The staff believes that the proposed TS do not provide adequate inservice inspection (ISI) of sleeved steam generator tubes, and that the inspection and expansion criteria in the EPRI Steam Generator Tube Examination Guidelines should be satisfied, as a minimum, for all sleeved tubes. Please provide appropriate wording in the TS reflecting this criteria. For reference, a previously adopted table incorporated in the TS for another licensee is attached.

Further, several TS sections (4.4.4.2; 4.4.4.3.b; 4.4.4.3.c; and 4.4.4.b) will be affected and need to be modified when a separate table is generated for sleeve inspections.

- 2. Describe the extent to which APS subscribes to the EPRI PWR Steam Generator Tube Examination Guidelines. For example, does APS use the Appendix G, "Qualified Personnel" and Appendix H "Qualified Techniques" in the EPRI Guidelines?
- 3. Describe the approach APS plans for adopting new and improved eddy current techniques for sleeve inspections.
- 4. Recent experience at the Kewaunee nuclear plant showed that visual test (VT) examinations of welded freespan joints may detect significant process-induced defects that were not detectable or resolvable by ultrasonic tests (UT) or eddy current (EC) examinations. The ABB-CE



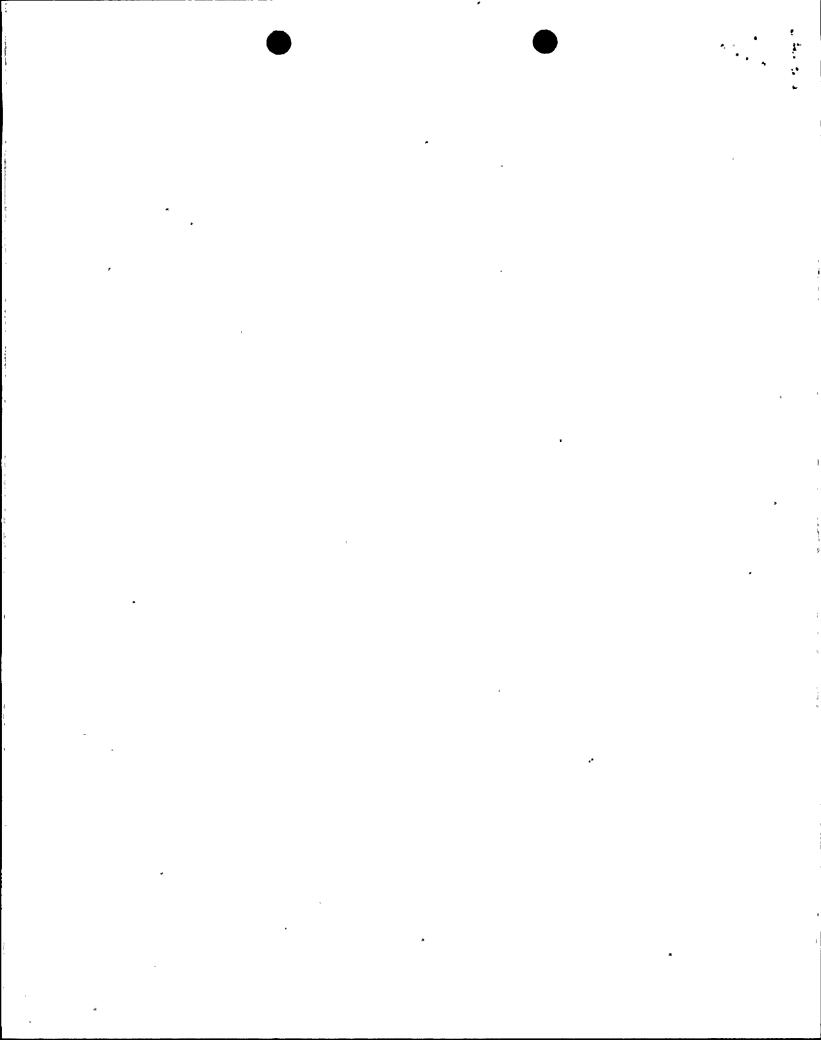


TABLE 4.4-23
STEAM GENERATOR TUBE SLEEVE INSPECTION

1ST SAMPLE INSPECTION			2ND SAMPLE INSPECTION			- 3RD-SAMPLE INSPECTION	
Sample Size	Result	Action Required	Result '	Action Required		Roouls	- Action Required
A minimum of & Tubes 20% of each type of installed sleeve pers.G. (1)	C-1	None .	N/A	N/A		N/A	H/A
pa13.0. <u>117</u>	C-2	Plug tubes containing defective tubes sleeves and inspect all remaining installed sleeves edditional 26-tubes in this 5.G.	C-1	None ,		N/A -	₩ <b>/</b> A
		-		Plug tubes containing defective tubes sleeves and inspect additional 48 tubes in this SC		C-1	None
· .		٠.	C-2	. •		c-3	Plugior sleeve defective tubes Perform action
			· <del>- · · · · · · · · · · · · · · · · · ·</del>	Perform action for C-3		c-3	for C-3-result-of first sample
	1		C-3	result of first 65ample	١	N/A	N/A
•	C-3	Inspect all installed sleeves tubes in this S.G., plug tubes containing defective tubes sleeves	All-oother S.G.s-ero_is C-1	None		N/A	H/A
<b>.</b>		and inspect 100% of the installed sleeves 36 subce in each the other S.G.	Some-Other S.G.o is C-2 but-ne edditional G-Gare G-3	Porform-action-for C-2-result-of-second sample Plug tubes containing defective sleeves		H/A	<del>N/A</del>
•		Special Report to NRC per Specification 6.9.2	Additional Other 5.G. is C-3	Inspect all sleeves tubes in each S.G. and plug tubes containing defective tubes sleeves. Special Report to NRC per Spec. 6.9.2.		N/A	W/A

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