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STN-50-529 Palo Verde Nuclear Station, Unit 2, Arizona Publi 05000529
STN-50-530 Palo Verde Nuclear Station, Unit 3, Arizona Publi 05000530
AUTH.NAME AUTHOR AFFILIATION
VAN BRUNT,E.E. Arizona Public Service Co.
RECIP.NAME RECIPIENT AFFILIATION
NOVAK,T.M. Assistant Director for Licensing

SUBJECT: Requests NRC review results of PWR design analyses to approve removal of pipe whip restraints.Meeting w/NRC to discuss request & facilitate exchange of info & questions suggested.

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NOTES:Standardized plant. 05000528
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[redacted]

ARIZONA PUBLIC SERVICE COMPANY
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October 14, 1982
ANPP-22020 - WFQ/TFQ

Mr. Thomas Novak
Assistant Director for Licensing
Division of Licensing
Office of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Subject: Palo Verde Nuclear Generating Station
(PVNGS) Units 1, 2 and 3
Docket Nos. STN-50-528/529/530
File: 82-056-026; G.1.01.10

Reference: NUREG/CR-2189, "Probability of Pipe Fracture in the primary coolant loop of a PWR plant", dated September, 1981.

Dear Mr. Novak:

The design basis for PVNGS Units 1, 2 and 3 includes the postulation of guillotine pipe breaks in the Reactor Coolant System (RCS) main loop piping. Recent analyses, the referenced report, of Westinghouse PWR's have shown that:

1. The probability of guillotine failures are extemely small (10^{-12})
2. A through-the-wall crack of detectable size will remain stable when subjected to an SSE.

A probabilistic analysis of the PVNGS RCS is being conducted by Lawrence Livermore Laboratories (LLL) to define the probability of a guillotine rupture. We have furnished LLL with information related to the design and expected loads on the RCS and our seismic consultant, ERTEC, is developing a site specific seismic hazard curve. This seismic hazard curve is expected to be complete and transmitted to LLL by October 31, 1982. It is expected that LLL will complete their analyses on PVNGS by December, 1982. Favorable results from this analysis is expected, similar to the results of the referenced report. This may justify the elimination of the double-ended guillotine break of RCS piping from the PVNGS design basis, which would dismiss the need for RCS pipe whip restraints. These restraints require substantial maintenance, surveillance and adjustment efforts during the in-service inspection program, which creates a substantial radiation exposure hazard to personnel performing these tasks. These restraints are also extensive and expensive to manufacture and install. If justified by the LLL analysis, we would very much consider removing them from the PVNGS design.

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The construction status of the restraints is shown below:

UNITS	STATUS
1	Installed, Unadjusted
2	Machining of saddles to start November, 1982
3	Machining of saddles to start January, 1985.

We feel, from results of previous analyses on other PWR designs, the LLL analysis for PVNGS will justify elimination of these restraints from the design basis. We request that the NRC review the results of LLL analyses as soon as they are available, so that you can approve the removal of the restraints from the PVNGS design. We request a meeting with the appropriate members of the NRC staff, as discussed with R. Bosnak, Chief, Mechanical Engineering Branch, on October 20, 1982, to discuss this request and to facilitate an exchange of information, and any additional questions the NRC staff may have on this matter.

Very truly yours,

E. E. Van Brunt, Jr.
APS Vice President,
Nuclear Projects
ANPP Project Director

EEVBJr/TFQ/sp

cc: E. Licitra
R. Bosnak
L. Bernabei
P. L. Hourihan
A. C. Gehr