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Arizona Public Service  
PALO VERDE NUCLEAR GENERATING STATION  
5801 S. WINTERSBURG ROAD TONOPAH, ARIZONA 85354-7529

WILLIAM L. STEWART  
EXECUTIVE VICE PRESIDENT  
NUCLEAR

102-03574-WLS/SAB/NLT  
December 20, 1995

U. S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Mail Station P1-37  
Washington, DC 20555

- References:
- 1) Letter dated November 3, 1995, from Charles R. Thomas, Project Manager-PVNGS, USNRC/NRR, to William L. Stewart, Executive Vice President, Nuclear, APS
  - 2) Letter No. 102-03297, dated March 28, 1995, from W. L. Stewart, Executive Vice President, Nuclear, APS, to USNRC
  - 3) Letter dated September 23, 1994, from Roy P. Zimmerman, Associate Director for Projects, USNRC/NRR, to William L. Stewart, Executive Vice President, Nuclear, APS

Dear Sirs:

**Subject: Palo Verde Nuclear Generating Station (PVNGS)  
Units 1, 2, and 3  
Docket Nos. STN 50-528/529/530  
Response to Request for Additional Information  
Regarding Generic Letter 92-08**

By letter dated November 3, 1995 (Reference 1), the NRC requested that Arizona Public Service Company (APS) submit additional information regarding Generic Letter (GL) 92-08, "Thermo-Lag 330-1 Fire Barriers." Specifically, the NRC requested that APS submit a description of the anticipated analytical methodology (including typical calculations) that will be used to determine the ampacity derating parameters for the Thermo-Lag fire barriers installed at PVNGS.

It is APS' intention to utilize test data as the basis for determining appropriate ampacity derating factors for PVNGS configurations. Analysis may be used to account for PVNGS specific deviations from tested configurations. APS has not developed the analytical approach that will be used if existing tests do not explicitly bound specific PVNGS configurations. Therefore, ampacity derating evaluations, applicable test reports, and typical calculations are not available for submittal at this time.

As previously reported to the NRC, APS has performed extensive field inspections to obtain as-built information on barrier configurations and attributes necessary for resolution of the fire endurance issue (Reference 2). Additionally, as previously reported, the PVNGS Regulatory Guide 1.75 installations, though not field inspected, were installed similar to 1-hour Thermo-Lag fire barrier installations. APS is in the process of evaluating industry information available to

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date to determine which design attributes must be considered when comparing tested configurations to the PVNGS configurations. Upon determination of the required design attributes, APS will determine if additional field inspections are required.

Provided as an enclosure to this letter is an ampacity resolution strategy flow chart which depicts the approach APS will utilize for Thermo-Lag-related ampacity concern resolution. APS expects to be able to submit a description of the analytical methodology, including typical calculations, should they be used to apply test results to PVNGS-specific configurations by June 30, 1996. Other work to be accomplished by June 30, 1996, includes establishing a cable and load database to allow rapid application of cable derating factors when finalized (39% derating factors are currently being used for preliminary evaluation purposes) and completing evaluations of available industry tests and comparing them to PVNGS specific configurations. Please note that although APS has no plans to perform ampacity testing at this time, the resolution strategy does not preclude testing. APS will develop firm ampacity derating test plans, as required, by June 30, 1996.

In the September 23, 1994 letter (Reference 3) the NRC stated that it is their view that the unresolved technical issues regarding ampacity derating can be resolved independently of the fire endurance issues. APS has made significant progress towards resolving the fire endurance issue. APS has eliminated the need for approximately 80% of the Thermo-Lag installed to meet fire protection commitments and is resolving the fire endurance issues on the Thermo-Lag which will remain for 10 CFR 50 Appendix R compliance. Field examinations have been performed for verification of as-built parameters important to fire endurance issue resolution, and combustibility and seismic issues are being resolved. APS acknowledges that the issues regarding ampacity derating can be resolved independently from the fire endurance issues and is pursuing such resolution.

The current schedule for resolution of Thermo-Lag-related issues, as identified at this time, is December 31, 1996. Should plant modifications be necessary to resolve long-term derating concerns, an updated schedule will be provided.

Should you have any questions, please contact Scott A. Bauer at (602) 393-5978.

Sincerely,



WLS/SAB/NLT/rv  
Enclosure

cc: L. J. Callan  
K. E. Perkins  
B. E. Holian  
K. E. Johnston



**ENCLOSURE**  
**AMPACITY RESOLUTION**  
**FLOW CHART**



# AMPACITY RESOLUTION FLOW CHART





