



Palo Verde Nuclear  
Generating Station

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**10 CFR 50.90**  
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102-04642-CDM/TNW/JAP  
December 20, 2001

U.S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Mail Station P1-37  
Washington, DC 20555-0001

Reference: 1) Letter 102-04623-CDM/TNW/JAP, dated November 9, 2001,  
"Request for Amendment to Technical Specification 5.6.5b, Core  
Operating Limits Report (COLR)," from David Mauldin, Arizona  
Public Service Company, to USNRC

**Subject: Palo Verde Nuclear Generating Station (PVNGS)**  
**Units 1, 2 and 3**  
**Docket Nos. STN 50-528/529/530**  
**Clarification of Commitments for Technical Specification**  
**5.6.5b, Core Operating Limits Report (COLR)**  
**Amendment Request**

Dear Sirs:

On November 9, 2001, Arizona Public Service Company (APS) requested an amendment to Technical Specification (TS) Section 5.0 for Palo Verde Nuclear Generating Station (PVNGS) Units 1, 2, and 3 (Reference 1). This proposed amendment would revise TS 5.6.5b, Core Operating Limits Report (COLR) to add topical report CENPD-404-P-A, "Implementation of ZIRLO<sup>TM</sup> Cladding Material in CE Nuclear Power Fuel Assembly Designs," to the list of analytical methods used to determine core operating limits.

Discussions were held between the NRC staff and APS personnel on December 18, 2001 and December 20, 2001 concerning the NRC regulatory commitments that were contained in Attachment 3 of the TS amendment request submitted November 9, 2001 (Reference 1). Based on those discussions, Attachment 3 of Reference 1 has been amended. This letter is transmitting a revised Attachment 3 for the TS amendment request of November 9, 2001 (Reference 1).

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Page 2

Should you have any questions, please contact Thomas N. Weber at (623) 393-5764.

Sincerely,

*Michael J. Winsor*  
for CDM

CDM/TNW/JAP/kg

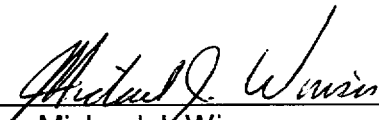
Enclosure:

1. Revised Attachment 3 – List of Regulatory Commitments

cc: E. W. Merschoff  
L. R. Wharton  
J. H. Moorman  
A. V. Godwin (ARRA)

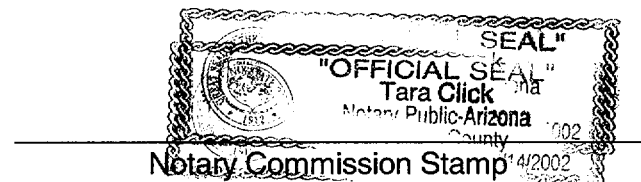
STATE OF ARIZONA            )  
  ) ss.  
COUNTY OF MARICOPA        )

I, Michael J. Winsor, represent that I am Director Nuclear Engineering, Arizona Public Service Company (APS), that the foregoing document has been signed by me on behalf of APS with full authority to do so, and that to the best of my knowledge and belief, the statements made therein are true and correct.

  
\_\_\_\_\_  
Michael J. Winsor

Sworn To Before Me This 20<sup>th</sup> Day Of December, 2001.

  
\_\_\_\_\_  
Notary Public



## **Enclosure**

**Revised Attachment 3, List of Regulatory Commitments to  
“Request for Amendment to Technical Specification 5.6.5b,  
Core Operating Limits Report (COLR), dated November 9, 2001**

## List of Regulatory Commitments

The following table identifies those actions committed to by APS in this document. Please direct questions regarding these commitments to Thomas N. Weber at (623) 393-5764.

REGULATORY COMMITMENT	
1.	<p>APS will restrict the modified Fuel Duty Index (FDIm) of each ZIRLO™ clad fuel pin to 110% of the maximum fuel pin value previously experienced at PVNGS plants in the aggregate. For a fraction of the fuel pins in a limited number of assemblies (4 or 8), APS will restrict the fuel duty of ZIRLO™ clad fuel pins to 120% of the maximum fuel pin value previously experienced at PVNGS plants in the aggregate as determined in a qualified analysis. This baseline FDIm will remain unchanged during the process of obtaining data.</p> <p>The FDIm limit will be applicable until data is available demonstrating the performance of ZIRLO™ cladding at PVNGS. If FDIm and measured oxide thickness correlate as expected or is conservative relative to predictions, APS would no longer restrict the FDIm except as required to meet the 100 micron oxide limit. The results from these inspections and measurements will be provided to the NRC. Alternatively, if the measured oxide is significantly greater than predicted, APS will provide the data and justification to the NRC prior to an increase to the limits on FDIm.</p>
2.	<p>Revise the PVNGS UFSAR (complete an LDCR) as needed to reflect the changes contained with the TS change to allow the use of ZIRLO™ fuel cladding material. The change shall include, but not limited to, the following items:</p> <ul style="list-style-type: none"> <li>• The corrosion limit, as predicted by the best-estimate model, will remain below 100 microns for all locations of the fuel.</li> <li>• The maximum radial integrated rod burnup is limited to 60 GWD/MTU for ZIRLO™ clad fuel.</li> <li>• Section 4.2 will be revised to reflect the manufacturing and implementation of ZIRLO™ clad fuel rods.</li> <li>• The applicable sections of Chapter 6 and Chapter 15 will be revised to reflect the re-analyses performed using ZIRLO™ cladding material properties.</li> </ul>