



Palo Verde Nuclear  
Generating Station

David Mauldin  
Vice President  
Nuclear Engineering

Tel: 623-393-5553  
Fax: 623-393-6077

Mail Station 7605  
PO Box 52034  
Phoenix, Arizona 85072-2034

102-05584-CDM/TNW/GAM  
October 12, 2006

Attn: Document Control Desk  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555-0001

Dear Sirs:

**Subject: Palo Verde Nuclear Generating Station (PVNGS)  
Unit 2  
Docket No. STN 50-529  
Request for Extension to Delay Implementation of Containment  
Sump Strainer Changes Associated with NRC Generic Letter 2004-02,  
"Potential Impact of Debris Blockage on Emergency Recirculation  
During Design Basis Accidents at Pressurized-Water Reactors"**

By letter no. 102-05336, dated September 1, 2005, Arizona Public Service Company (APS) submitted to the NRC a response to Generic Letter (GL) 2004-02, "Potential Impact of Debris Blockage on Emergency Recirculation During Design Basis Accidents at Pressurized-Water Reactors." In that submittal, APS committed to install new containment sump strainers in PVNGS Units 1, 2, and 3 during the refueling outages scheduled for spring 2007, fall 2006, and fall 2007, respectively. This submittal is requesting an extension to delay the installation of the new containment sump strainers in Unit 2 until the refueling outage scheduled for April 2008.

APS has been aggressively pursuing the completion of the design and procurement of the new sump strainers in order to meet the fall 2006 Unit 2 refueling outage installation commitment. A letter of Intent was issued to Control Components, Inc., (CCI) in August 2005 to design and provide the new containment sump strainers for PVNGS, and APS has maintained regular contact with CCI to help assure that the material delivery schedule would be met. APS has been actively working with CCI to assure that the materials and documentation would be available in time for the fall 2006 Unit 2 outage installation. However, it was very recently determined that the materials and material documentation for the new sump strainers would not be available in time for the modification to be mockup tested and installed in Unit 2 during the fall 2006 refueling outage. The delay is a result of CCI's workload, which has included designing and supplying new containment sump strainers to other nuclear plants with fall 2006 refueling outages. This delay is not expected to impact the replacement sump strainer installation in Units 1 and 3 during their scheduled 2007 refueling outages.

A116

ATTN: Document Control Desk  
U.S. Nuclear Regulatory Commission  
Request for Extension to Delay Implementation of Containment Sump Strainer Changes  
Associated with NRC Generic Letter 2004-02, "Potential Impact of Debris Blockage on  
Emergency Recirculation During Design Basis Accidents at Pressurized-Water  
Reactors"  
Page 2

In SECY-06-0078, dated March 31, 2006, the NRC staff recognized that licensees may encounter situations that could delay the implementation of the final containment sump strainer hardware modifications as committed in response to GL 2004-02. SECY-06-0078 states the following with respect to extension requests to delay the implementation of final containment sump hardware modifications for GL 2004-02:

*Proposed extensions to permit changes at the next outage of opportunity after December 2007 may be acceptable if, based on the licensee's request, the staff determines that:*

- *the licensee has a plant-specific technical/experimental plan with milestones and schedule to address outstanding technical issues with enough margin to account for uncertainties; and*
- *the licensee identifies mitigative measures to be put in place prior to December 31, 2007, and adequately describes how these mitigative measures will minimize the risk of degraded ECCS and CSS functions during the extension period.*

APS is requesting an extension to delay the installation of the new containment sump strainers in Unit 2 until the next outage opportunity after December 31, 2007, which would be the Unit 2 refueling outage scheduled for April 2008. APS has the following plant-specific technical/experimental plan with milestones and schedule to address outstanding technical issues with enough margin to account for uncertainties:

- The new strainer confirmatory head-loss testing, capture ratio verification, and chemical effects margin validation are scheduled to be completed by March 31, 2007, as shown in the attached commitments list.

The following mitigative measures have been or will be put in place in Unit 2 prior to December 31, 2007:

- The compensatory operator actions described in APS letter no. 102-05236, dated March 25, 2005, in response to NRC Bulletin 2003-01, "Potential Impact of Debris Blockage on Emergency Sump Recirculation at Pressurized Water Reactors," have been implemented.
- The Fiberfrax insulation will be removed from Unit 2 during the fall 2006 refueling outage, as shown in the attached commitment list.

ATTN: Document Control Desk  
U.S. Nuclear Regulatory Commission  
Request for Extension to Delay Implementation of Containment Sump Strainer Changes  
Associated with NRC Generic Letter 2004-02, "Potential Impact of Debris Blockage on  
Emergency Recirculation During Design Basis Accidents at Pressurized-Water  
Reactors"  
Page 3

- The changes to programs and procedures to ensure and/or enhance the control of transportable debris in containment will be implemented in Unit 2 during the fall 2006 refueling outage, as shown in the attached commitment list.

In addition, the following favorable conditions exist at PVNGS Unit 2:

- The existing PVNGS Unit 2 sump screens (two sumps with screens approximately 210 sq. ft. each) are relatively large compared to typical plant screens prior to the GL 2004-02 replacements.
- Although PVNGS Unit 2 uses trisodium phosphate as a containment pH buffer, no calcium silicate insulation material is used in containment that might react to form calcium phosphate precipitate.

If approved, APS commits to install new sump strainers in PVNGS Unit 2 during the 2R14 refueling outage scheduled to be completed by approximately May 15, 2008. The list of GL 2004-02 commitments and status or due dates is provided in the attachment.

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

Sincerely,



CDM/TNW/GAM/

Attachment: As stated

cc:	B. S. Mallett	NRC Region IV Regional Administrator
	M. B. Fields	NRC NRR Project Manager
	G. G. Warnick	NRC Senior Resident Inspector for PVNGS

**Attachment**  
**List of Generic Letter 2004-02 Commitments and Status or Due Dates**

<b>GL 2004-02 REGULATORY COMMITMENT (from APS letter no. 102-05560 dated August 30, 2006)</b>	<b>PREVIOUS DUE DATE</b>	<b>REVISED DUE DATE or STATUS</b>
1. Evaluate the recommendations contained in the Westinghouse downstream effects evaluation for PVNGS and establish an implementation schedule for appropriate recommendations.	December 31, 2005	Completed
2. Perform confirmatory head-loss testing of new strainer with plant specific debris to ensure an adequate design.	March 31, 2007	No Change
3. Verify that a capture ratio of 97% or higher can be achieved in the final design of the new sump screen to ensure that the fuel evaluation contained in the Westinghouse downstream effects evaluation is bounding.	March 31, 2007	No Change
4. Perform sump strainer structural evaluation to ensure seismic and operational integrity.	October 31, 2006	No Change
5. Validate allocated margins for Chemical Effects in strainer head-loss to ensure an adequate design.	March 31, 2007	No Change
6. Perform a confirmatory containment latent debris walkdown of PVNGS Units 1 and 3.	June 30, 2006	Completed
7. Perform a confirmatory containment unqualified coating walkdown of PVNGS Units 1 and 3.	June 30, 2006	Completed
8. Review the existing programmatic controls for containment coatings identified in the response to GL 98-04, "Potential for Degradation of the Emergency Core Cooling System and the Containment Spray System after a Loss-of-Coolant Accident Because of Construction and Protective Coating Deficiencies and Foreign Material in Containment," for their adequacy.	November 30, 2006	No Change
9. Review the existing programmatic and procedural controls in place to prevent potentially transportable debris (insulation, signs and foreign material) in the containment building to ensure that the bounding assumptions in the design of the new strainers will be maintained.	November 30, 2006	No Change

**Attachment**  
**List of Generic Letter 2004-02 Commitments and Status or Due Dates**

<b>GL 2004-02 REGULATORY COMMITMENT (from APS letter no. 102-05560 dated August 30, 2006)</b>	<b>PREVIOUS DUE DATE</b>	<b>REVISED DUE DATE or STATUS</b>
10. Implement in Unit 1 changes to programs and procedures to ensure and/or enhance the control of transportable debris in containment.	1R13 refueling outage (approx. May 31, 2007)	No Change
11. Implement in Unit 2 changes to programs and procedures to ensure and/or enhance the control of transportable debris in containment.	2R13 refueling outage (approx. Nov. 30, 2006)	No Change
12. Implement in Unit 3 changes to programs and procedures to ensure and/or enhance the control of transportable debris in containment.	3R13 refueling outage (approx. Dec. 31, 2007)	No Change
13. Install larger sump strainers in PVNGS Unit 1.	1R13 refueling outage (approx. May 31, 2007)	No Change
14. Install larger sump strainers in PVNGS Unit 2.	2R13 refueling outage (approx. Nov. 30, 2006)	2R14 refueling outage (approx. May 15, 2008)
15. Install larger sump strainers in PVNGS Unit 3.	3R13 refueling outage (approx. Dec. 31, 2007)	No Change
16. Remove installed Fiberfrax insulation in PVNGS Unit 1.	1R13 refueling outage (approx. May 31, 2007)	No Change
17. Remove installed Fiberfrax insulation in PVNGS Unit 2.	2R13 refueling outage (approx. Nov. 30, 2006)	No Change

**Attachment**  
**List of Generic Letter 2004-02 Commitments and Status or Due Dates**

<b>GL 2004-02 REGULATORY COMMITMENT                      (from APS letter no. 102-05560                      dated August 30, 2006)</b>	<b>PREVIOUS                      DUE DATE</b>	<b>REVISED                      DUE DATE or                      STATUS</b>
<b>18. Remove installed Fiberfrax insulation in PVNGS Unit 3.</b>	<b>3R13 refueling outage (approx. Dec. 31, 2007)</b>	<b>No Change</b>
<b>19. By June 30, 2006, after plant specific strainer testing has been completed and the Westinghouse downstream effects evaluation for PVNGS has been evaluated, APS will submit an update to the NRC to report the validation of the allocated margins for chemical effects and identify any recommendations from the Westinghouse evaluation to be implemented.</b>	<b>March 31, 2007</b>	<b>No Change</b>