



A subsidiary of Pinnacle West Capital Corporation

Palo Verde Nuclear  
Generating Station

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**102-06060-DCM/DAF**  
**September 10, 2009**

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

Dear Sirs:

**Subject: Palo Verde Nuclear Generating Station (PVNGS)  
Units 1, 2, and 3  
Docket Nos. STN 50-528, 50-529 and 50-530  
Response to August 11, 2009, Request for Additional Information for the  
Review of the PVNGS License Renewal Application**

By letter no. 102-05937, dated December 11, 2008, Arizona Public Service Company (APS) submitted a license renewal application (LRA) for PVNGS Units 1, 2, and 3. By letter dated August 11, 2009, the NRC issued a request for additional Information (RAI) related to the PVNGS LRA. Enclosed is APS's response to the August 11, 2009, RAI.

APS makes no commitments in this letter. Should you need further information regarding this request, please contact Russell A. Stroud, Licensing Section Leader, at (623) 393-5111.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on 9/10/09  
(Date)

Sincerely,

*D.C. Mims*

DCM/RAS/DAF

Enclosure: Response to August 11, 2009, Request for Additional Information for the Review  
of the Palo Verde Nuclear Generating Station License Renewal Application

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Response to August 11, 2009, Request for Additional Information for the Review of the Palo  
Verde Nuclear Generating Station License Renewal Application.  
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cc: E. E. Collins Jr. NRC Region IV Regional Administrator  
J. R. Hall NRC NRR Project Manager  
R. I. Treadway NRC Senior Resident Inspector for PVNGS  
B. E. Holian NRC License Renewal Director  
L. M. Regner NRC License Renewal Project Manager

**ENCLOSURE**

**Response to August 11, 2009, Request for Additional Information for  
the Review of the Palo Verde Nuclear Generating Station License  
Renewal Application**

**Response to August 11, 2009, Request for Additional Information for the Review of the Palo Verde Nuclear Generating Station License Renewal Application**

**NRC RAI B2.1.32-1**

Under Aging Management Programs of Appendix B, the applicant states that the Protective Coating Monitoring and Maintenance Program, Section XI.S8 of NUREG-1801, "Generic Aging Lessons Learned (GALL) Report," is not credited for aging management. Also, the Structures Monitoring Program in Appendix B, section B2.1.32, states that "Though coatings may have been applied to the external surfaces of structural members, no credit was taken for these coatings in the determination of aging effects for the underlying materials. The Structures Monitoring Program evaluates the condition of the coatings as an indication of the condition of the underlying materials." However, in addition to using the Protective Coating Monitoring and Maintenance Program to ensure the function of coated structures and components, the GALL Report states that "Proper maintenance of protective coatings inside containment is essential to ensure operability of post-accident safety systems that rely on water recycled through the containment sump/drain system." Although the licensee does not credit the program for aging management, there needs to be adequate assurance that there is proper maintenance of the protective coatings in containment, such that they will not degrade and become a debris source that may challenge the Emergency Core Cooling Systems performance. Therefore the staff requires the following additional information:

1. Please describe in detail, the coatings assessment program referenced in the supplemental response to GL 2004-02, dated February 28, 2008. How will the program ensure that there will be proper maintenance of the protective coatings inside containment and ensure operability of post-accident safety systems that rely on water recycled through the containment sump/drain system in the extended period of operation? Also, describe the frequency and scope of the inspections, acceptance criteria, and the qualification of personnel who perform containment coatings inspections.

**APS Response to RAI B2.1.32-1**

As noted in the RAI, the coatings program is not credited for Palo Verde Nuclear Generating Station (PVNGS) license renewal aging management and, as such, this program has not been included within the scope of license renewal. However, Arizona Public Service Company (APS) agrees that the coatings program is important for the Emergency Core Cooling System (ECCS) performance.

The Palo Verde Containment Coatings Condition Assessment procedure defines the in-service monitoring program for containment coatings to include service level I coatings and unqualified coatings. Inspection results are used to maintain coating system integrity and as an input into the mechanical design of the ECCS sump and input into the Mechanical Design/Nuclear Fuel Management Design Basis Accident (DBA) Loss-of-Coolant Accident (LOCA) Analysis. The procedure directs visual inspections of accessible coated surfaces of each area or room of containment to look for defects such as:

- Blistering
- Cracking
- Flaking/Peeling delamination

**Response to August 11, 2009, Request for Additional Information for the Review of the Palo Verde Nuclear Generating Station License Renewal Application**

- Rusting
- Mechanical or physical damage

Inspections are performed every operating cycle. Coatings identified as being degraded are documented in the corrective action process. The coating specialist reviews newly identified defects or damage to determine if further testing is required to identify the extent of the defect or damage and to answer any operability questions. Possible corrective actions include:

- Recoating
- Coating removal
- Repair at a future date (bare substrate addressed)
- Monitor and trend (coatings that are not added to unqualified coatings log)

Coatings inspectors are qualified to a certified coatings inspection program or are ANSI N45.2.6 certified.

Please note that by letter no. 102-05973, dated March 13, 2009, (Agencywide Document Access and Management System [ADAMS] Accession No. ML090830334) APS submitted Revision 1 to Supplemental Response to NRC Generic Letter 2004-02. This submittal provided a more detailed description of the PVNGS coatings program than that provided in the February 2008 GL 2004-02 supplemental response submittal.