



Maria L. Lecal
Senior Vice President, Nuclear
Regulatory & Oversight

**Palo Verde
Nuclear Generating Station**
P.O. Box 52034
Phoenix, AZ 85072
Mail Station 7605
Tel 623.393.6491

102-07292-MLL/TNW
September 1, 2016

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

Dear Sirs:

Subject: **Palo Verde Nuclear Generating Station
Units 1, 2, and 3
Docket Nos. STN 50-528, 50-529, and 50-530
Response to NRC Generic Letter 2016-01, *Monitoring of
Neutron-Absorbing Materials in Spent Fuel Pools***

Pursuant to 10 CFR 50.54(f), this letter provides the Arizona Public Service Company (APS) response to NRC Generic Letter 2016-01, *Monitoring of Neutron-Absorbing Materials in Spent Fuel Pools*, dated April 7, 2016. The Generic Letter identified the following purposes for spent fuel pools (SFP):

1. To request that addressees submit information, or provide references to previously docketed information, which demonstrates that credited neutron-absorbing materials in the SFP of power reactors and the fuel storage pool, reactor pool, or other wet locations designed for the purpose of fuel storage, as applicable, for non-power reactors, are in compliance with the licensing and design basis, and with applicable regulatory requirements; and that there are measures in place to maintain this compliance.
2. To collect the requested information and determine if additional regulatory action is required.

As described in the *Requested Information from Power Reactor Addressees* section of the Generic Letter (page 7 of 15), the Palo Verde Nuclear Generating Station (PVNGS), Units 1, 2, and 3, are response Category 1, defined as follows:

Power reactor addressees that do not credit neutron-absorbing materials other than soluble boron in the analysis of record (AOR). In some cases, no neutron-absorbing material is present in the spent fuel storage racks, and in other cases, credit for the neutron-absorbing material has been removed through a regulatory action (e.g., approved license amendment). Those addressees may submit a response letter confirming that no neutron-absorbing materials are currently credited to meet NRC subcriticality requirements in the SFP.

Consistent with this definition, APS confirms that no neutron-absorbing material is present in the PVNGS spent fuel storage racks and none is currently credited to meet NRC subcriticality requirements in the spent fuel pools.

The spent fuel pool storage racks are non-borated (i.e., no neutron-absorbing material) stainless steel honeycomb structures with vertical rectangular fuel storage cells. The spent fuel pool storage racks incorporate a non-borated stainless steel chevron or L-insert in alternating cells. The non-borated stainless steel construction of the racks and L-inserts is compatible with the spent fuel pool borated water environment by design, such that condition monitoring is not necessary. The spent fuel pool nuclear criticality safety analysis of record credits the non-borated stainless steel of the storage racks and the L-inserts in meeting the criteria of 10 CFR 50.68.

APS submitted a license amendment request (LAR) to update the current licensing basis regarding criticality for the spent fuel storage racks at PVNGS, by letter number 102-07149, *License Amendment Request to Revise Technical Specifications to Incorporate Updated Criticality Safety Analysis*, dated November 25, 2015, [Agencywide Documents Access and Management System (ADAMS) Accession Number ML15336A251]. The LAR was first supplemented by letter number 102-07181, *Supplemental Information Regarding License Amendment Request to Revise Technical Specifications to Incorporate Updated Criticality Safety Analysis*, dated January 29, 2016 (ADAMS Accession Number ML16043A361). The LAR was further supplemented by letter number 102-07275, *Response to Request for Additional Information Regarding License Amendment Request to Revise Technical Specifications to Incorporate Updated Criticality Safety Analysis*, dated June 30, 2016 (ADAMS Accession Number ML16182A519).

The criticality analysis described in the LAR does credit the planned installation of neutron-absorbing materials other than soluble boron in the spent fuel pools at PVNGS. APS proposed a *Spent Fuel Storage Rack Neutron Absorber Monitoring Program* to be added to the PVNGS Technical Specifications, consistent with the purposes of the Generic Letter and industry operating experience.

This response is submitted in accordance with 10 CFR 50.4. This response does not contain any proprietary, sensitive, safeguards or classified information. No commitments are being made to the NRC by this letter.

Should you need further information regarding this response, please contact Michael D. Dilorenzo, Licensing Section Leader, at (623) 393-3495.

ATTN: Document Control Desk
U.S. Nuclear Regulatory Commission
Response to NRC Generic Letter 2016-01, *Monitoring of Neutron-Absorbing Materials
in Spent Fuel Pools*
Page 3

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

Executed on September 1, 2016
(Date)

Sincerely,

MLL/TNW/CJS/af

cc: K. M. Kennedy
S. P. Lingam
M. M. Watford
C. A. Peabody

NRC Region IV Regional Administrator
NRC NRR Project Manager for PVNGS
NRC NRR Project Manager
NRC Senior Resident Inspector for PVNGS