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

Reference: Palo Verde Nuclear Generating Station Units 1, 2 and 3
NRC Integrated Inspection Report 05000528/2013002,
05000529/2013002, 05000530/2013002, and Notice of Violation,
dated May 14, 2013

Dear Sirs:

Subject: Palo Verde Nuclear Generating Station (PVNGS)
Units 1, 2 and 3
Docket Nos. STN 50-528, 50-529, and 50-530
Reply to Notice of Violation EA-13-024

In the above referenced letter to Arizona Public Service (APS), the NRC identified in a Notice of Violation (NOV) that APS failed to maintain the Updated Final Safety Analysis Report (UFSAR) in accordance with the requirements of 10 CFR 50.71(e).

Pursuant to the requirements of 10 CFR 2.201 and NOV EA-13-024, APS hereby submits its reply to the NOV. Enclosure 1 to this letter contains a restatement of the NOV while Enclosure 2 contains the APS reply to the NOV.

No commitments are being made to the NRC by this letter.

If you have any questions, please contact Mark McGhee, Operations Support Manager, Regulatory Affairs, at (623) 393-4972.

Sincerely,



FOR D.C. MIMS

DCM/DFH/hsc

Enclosures: 1. Restatement of Notice of Violation EA-13-024
2. Reply to Notice of Violation EA-13-024

cc: A. T. Howell III NRC Region IV Regional Administrator
J. K. Rankin NRC NRR Project Manager - (electronic / paper)
M. A. Brown NRC Senior Resident Inspector for PVNGS

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Enclosure 1
Restatement of Notice of Violation (NOV) EA-13-024

Enclosure 1
Restatement of Notice of Violation (NOV) EA-13-024

The excerpt below from NRC Integrated Inspection Report 05000528/2013002, 05000529/2013002, and 05000530/2013002, dated May 14, 2013, provides a restatement of the Notice of Violation.

During an NRC inspection conducted from January 14 through 18, 2013, a violation of NRC requirements, with two examples, was identified. In accordance with the NRC Enforcement Policy, the violation is listed below:

Title 10 CFR 50.71(e) requires, in part, that each person licensed to operate a nuclear power reactor under the provisions of 50.21 or 50.22, shall update periodically the final safety analysis report (FSAR), originally submitted as part of the application for the license, to assure that the information included in the report contains the latest information developed. The submittal shall include the effects of all changes made in the facility or procedures as described in the FSAR and all safety analyses and evaluations performed by the applicant or licensee, either in support of approved license amendments or in support of conclusions, that changes did not require a license amendment in accordance with § 50.59(c)(2). The updated information shall be appropriately located within the update to the FSAR.

Contrary to the above requirement, the licensee did not update periodically the Updated Final Safety Analysis Report, originally submitted as part of the application for the license, to assure that the information included in the report contains the latest information developed. Specifically:

- 1. From 1988 to 2013, the licensee did not update Chapter 11.2.2 with a complete description of the liquid radioactive waste system, including pumping of the evaporator concentrates to the high total dissolved solids holdup tanks and a description of the temporary adsorption tanks and their use.*
- 2. From December 2003 to January 2013, the licensee did not update Chapters 11.4.2.7 and 12.2.1.9 with a complete description of the Old Steam Generator Storage Facility, which was used for long-term storage of radioactive waste on the owner controlled site until decommissioning.*

This is a Severity Level IV violation.

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Arizona Public Service (APS) concurs with the violation. NRC Integrated Inspection Report 05000528/2013002, 05000529/2013002, 05000530/2013002, and Notice of Violation, dated May 14, 2013, documents that APS did not update periodically the Updated Final Safety Analysis Report (UFSAR) in accordance with 10 CFR 50.71(e). This was determined to be a Severity Level IV violation with the following two examples:

Example 1: From 1988 to 2013, the licensee did not update Chapter 11.2.2 with a complete description of the liquid radioactive waste system, including pumping of the evaporator concentrates to the high total dissolved solids holdup tanks and a description of the temporary adsorption tanks and their use.

Example 2: From December 2003 to January 2013, the licensee did not update Chapters 11.4.2.7 and 12.2.1.9 with a complete description of the Old Steam Generator Storage Facility, which was used for long-term storage of radioactive waste on the owner controlled site until decommissioning.

Causes For The Violation

An investigation was conducted to determine the causes for the Notice of Violation (NOV) and to identify the corrective actions needed to address the problem. The investigation identified a separate cause for each of the two examples. The causes are as follows:

1. Example 1 - When UFSAR-related conditions adverse to quality were identified, station personnel did not demonstrate a bias for action to ensure that the description of the facility and its operation was accurately reflected in the UFSAR.
2. Example 2 – Roles and responsibilities are not clearly defined for verifying compliance with the guidance of Regulatory Guide 1.70, *Standard Format and Content of Safety Analysis Reports for Nuclear Power Plants*, when new structures are added to UFSAR Chapters 11, *Radioactive Waste Management*, and 12, *Radiation Protection*.

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Corrective Actions That Have Been Taken And The Results Achieved

Corrective actions taken to address Example 1

Example 1 involves operation of the Liquid Radwaste System (LRS) in a manner that is not described in the UFSAR. In October of 2007, as part of the Palo Verde Nuclear Generating Station (PVNGS) 95003 Supplemental Team Inspection, the NRC identified a Severity Level IV Violation of 10 CFR 50.71(e) for pumping LRS evaporator concentrates to the High Total Dissolved Solids (TDS) Holdup Tanks as opposed to the Concentrate Monitor Tanks as specified in UFSAR, Chapter 11.2.2. The corrective action for this issue changed the guidance provided in procedure 40OP-9LR06, Operation of the Liquid Radwaste Evaporator, in May 2009 to incorporate the results of an engineering evaluation of LRS water transfers and to discontinue the transfer of evaporator concentrates to the TDS tanks. This procedure change restored compliance related to the specific violation identified in the October 2007 NRC 95003 Supplemental Team Inspection for the pumping of LRS evaporator concentrates to the High TDS Holdup Tanks.

During the 2009 investigation of the LRS evaporator concentrates issue, the extent of condition review identified a separate discrepancy with the use of a Temporary Adsorption Vessel (TAV) that was not installed in accordance with engineering design requirements and was not described in the UFSAR. This condition was documented in the PVNGS corrective action program and corrective actions were issued to determine a resolution to the TAV issue. However, there were significant delays with implementation of corrective actions to resolve the TAV issue. During the January 2013 NRC Radiation Protection inspection, the use of the TAV in the LRS was identified by NRC inspectors as a potential NOV.

During the week of January 21, 2013, an action plan was established to resolve the TAV issue. To promptly restore compliance, it was decided that the permanently installed LRS purification vessel, LRN-D01, would be converted back to a charcoal adsorption bed and the TAV would be isolated and removed from the LRS.

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This action plan to remove the TAV from service and disconnect and isolate the TAV in all three units was completed in April 2013. Additional actions revised procedure 40OP-9LR07, LRS Demineralizer, to operate the system using LRS purification vessel LRN-D01 as an adsorption bed. These changes restored operation of the LRS back to conditions as originally described in the UFSAR. An additional corrective action to change the UFSAR will be performed to describe the change to the system for use of LRS purification vessel LRN-D01 to take the place of the TAV for removal of total organic compounds.

In the NRC Inspection Report 05000528/2013002, 05000529/2013002, 05000530/2013002, and Notice of Violation, on page 28, the following statement is provided:

During the current inspection in January 2013, the inspectors observed that the licensee continued to operate the Unit 2 liquid radiological waste system in a manner different from that specified in the UFSAR. Specifically, the licensee continued to pump evaporator concentrates to the high total dissolved solids holdup tanks rather than the concentrate monitor tanks, as specified in the UFSAR.

APS contacted the NRC Branch Chief and the Lead Inspector for the inspection team that issued this NOV to gain an understanding of this statement since APS performed corrective actions, in response to the initial violation, which discontinued pumping evaporator concentrates to the high TDS holdup tanks. This practice was stopped when the operations procedure was revised in May 2009. The NRC concurred with APS and requested that this be mentioned in the APS reply to the NOV.

Corrective actions taken to address Example 2

Actions to restore compliance for Example 2 are in progress. These actions include an evaluation of isotopic content in the old steam generators and the generation of a Licensing Document Change Request (LDCR) to update the UFSAR, Chapters 11 and 12. The LDCR update will include the design basis (maximum and expected volume of radioactive waste and quantity of stored radioactivity), the system description (method for packaging, waste storage capacity, and expected onsite storage time), the basis for the radiation protection design (described for input into shielding design calculations), the source location

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(specified for locating on plant layout drawings), and the isotopes and curie content of the radioactive sources within the Old Steam Generator Storage Facility (OSGSF).

Corrective Actions That Will Be Taken To Avoid Further Violations

In addition to the actions described above, the following corrective actions have been generated to prevent recurrence:

- For Example 1, Procedure 93DP-0LC03, *Licensing Document Maintenance*, will be revised to include the responsibility for the Nuclear Regulatory Affairs (NRA) department to enhance management involvement to prioritize and drive UFSAR related adverse conditions to resolution.
- For Example 2, Procedure 93DP-0LC03, *Licensing Document Maintenance*, will be revised to clearly define the roles and responsibilities of the responsible organization's leaders and LDCR initiators with respect to UFSAR changes and compliance with the guidance of Regulatory Guide 1.70.
- Also, for Example 2, Technical Document 81TD-0EE10, *Design Change Process*, will be revised to require the addition or modification of structures or facilities be evaluated for potential impact to UFSAR Chapters 11 and 12.

Date When Full Compliance Will Be Achieved

1. Full compliance for Example 1 will be achieved in June 2013 when UFSAR revision 17 is submitted to the NRC containing the change that describes the permanently installed LRS adsorption bed as a charcoal filled vessel.
2. Full compliance for Example 2 will be achieved in September 2013 with the completion of a LDCR to update the UFSAR, Chapters 11 and 12 to include the design basis (maximum and expected volume of radioactive waste and quantity of stored radioactivity), the system description (method

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for packaging, waste storage capacity, and expected onsite storage time), the basis for the radiation protection design (described for input into shielding design calculations), the source location (specified for locating on plant layout drawings), and the isotopes and curie content of the radioactive sources within the OSGSF.