March 2, 2005

Gregg R. Overbeck, Senior Vice President, Nuclear
Arizona Public Service Company
P.O. Box 52034
Phoenix, AZ  85072-2034

SUBJECT:  ANNUAL ASSESSMENT LETTER - PALO VERDE NUCLEAR GENERATING STATION (REPORT 05000528/2005001; 05000529/2005001; 05000530/2005001)

Dear Mr. Overbeck:

On February 3, 2005, the NRC completed its end-of-cycle plant performance assessment of the Palo Verde Nuclear Generating Station. The end-of-cycle review for Palo Verde involved the participation of reactor technical divisions in evaluating performance indicators for the most recent quarter and inspection results for the period from January 1 through December 31, 2004. The purpose of this letter is to inform you of our assessment of your safety performance during this period and our plans for future inspections at your facility so that you will have an opportunity to prepare for these inspections and to inform us of any planned inspections that may conflict with your plant activities.

This performance review and enclosed inspection plan do not include physical protection information. A separate end-of-cycle performance review letter designated and marked as "Exempt from Public Disclosure in Accordance with 10 CFR 2.390" will include the physical protection review and resultant inspection plan.

Overall, Palo Verde operated in a manner that preserved public health and safety and fully met all cornerstone objectives. Plant performance for the most recent quarter, as well as for the first three quarters of the assessment cycle, was within the Licensee Response Column of the NRC's Action Matrix, based on all inspection findings being classified as having very low safety significance (Green) and all performance indicators indicating performance at a level requiring no additional NRC oversight (Green). However, two apparent violations, including the final significance determination of an associated potentially greater than Green finding, involving the voiding of the emergency core cooling system containment sump suction piping is still under review as part of the significance determination and traditional enforcement processes. These apparent violations were discussed at a conference on February 17, 2005.

During the assessment process, the staff identified a substantive crosscutting issue in the area of human performance. The adverse trend in human performance issues indicates that you have not effectively addressed the underlying causes associated with this substantive crosscutting area. The substantive crosscutting issue involved 16 Green findings. These
findings shared several common performance characteristics; however, they were dominated by personnel errors (e.g., instances of failing to follow procedure) and resource issues (e.g., inadequate procedures and work instructions). These problems were identified across several cornerstones and involved multiple groups within your organization. Specifically, nine Green findings involving personnel errors were primarily associated with a failure to follow procedures. Three of these findings involved personnel failing to implement emergency procedures during the loss of offsite power event in June 2004, while other findings pertained to personnel errors involving the movement of irradiated fuel. In addition, four findings were identified regarding the adequacy of procedures and work instructions. In one example, the work instructions for pressurizer spray valve maintenance were not adequate and the valve failed open shortly after maintenance on the valve and valve positioner.

Additionally, a substantive crosscutting issue in problem identification and resolution has been identified based on a number of corrective action findings. The adverse trend in problem identification and resolution issues indicates that you have not effectively addressed the underlying causes associated with this substantive crosscutting area. The substantial crosscutting issue involved 18 Green findings. These findings were indicative of implementation problems within the specific areas of identifying problems and entering them in the corrective action program, evaluating conditions in the corrective action program, and implementing effective corrective actions. These problems were identified across several cornerstones and involved multiple groups within your organization. Specifically, four findings were identified with a common performance characteristic associated with the failure to adequately identify problems in your corrective action program. In two of these cases, NRC inspectors had to prompt Palo Verde staff members to enter problems into your program. In addition, seven findings shared a common performance characteristic associated with a failure to adequately evaluate conditions. Four of these examples involved the failure to promptly evaluate the operability of degraded or nonconforming equipment. This included the failure to promptly evaluate voided suction piping in the emergency core cooling systems. Also of concern were seven Green findings with a common performance characteristic associated with inadequate corrective actions. Several of these findings resulted in plant events or the failure of safety equipment to operate correctly during an event. For example, the failure to take adequate corrective actions for a failure of an emergency diesel generator excitation circuit contributed to the failure of the Unit 2, Train A emergency diesel generator to respond as designed to the loss of offsite power event in June 2004.

Through implementation of the baseline inspection program, we will assess your actions to address both of these crosscutting issues. The closure of these issues will be based on whether your corrective actions reduce the number of findings.

As noted in our previous annual assessment letter, a meeting was conducted at the NRC Region IV Office on January 14, 2004, to discuss aspects of safety conscious work environment at Palo Verde. This issue was discussed again in our midcycle assessment letter, dated August 30, 2004. During the January 14 meeting, you discussed plans to conduct additional employee training related to safety conscious work environment and conduct a site survey in 2005 to gauge the work environment and employee willingness to raise safety issues. We understand that the training has been completed and the site survey is scheduled to be completed by March 2005. We will continue to focus our baseline inspection activities on your actions to address your assessments in this area.
The enclosed inspection plan details the inspections, less those related to physical protection, scheduled through September 30, 2006. In addition to the baseline inspections, NRC will also be conducting inspections related to Inspection Procedure 50001, "Steam Generator Replacement Inspection," Temporary Instructions 2515/150, "Reactor Pressure Vessel Head and Vessel Head Penetration Nozzles," and 2515/160, "Pressurizer Penetration Nozzles and Steam Space Piping Connections in U.S. Pressurized Water Reactors (NRC Bulletin 2004-01)."

The inspection plan is provided to minimize the resource impact on your staff and to allow for scheduling conflicts and personnel availability to be resolved in advance of inspector arrival onsite. Routine resident inspections are not listed due to their ongoing and continuous nature. The inspections in the last 9 months of the inspection plan are tentative and may be revised at the midcycle review meeting.

In accordance with 10 CFR 2.390 of the NRC's “Rules of Practice,” a copy of this letter and its enclosure will be made available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at http://www.nrc.gov/reading-rm/adams.html (the Public Electronic Reading Room).

If circumstances arise which cause us to change this inspection plan, we will contact you to discuss the change as soon as possible. Please contact me at 817-860-8173 with any questions you may have regarding this letter or the inspection plan.

Sincerely,

/RA/

Troy W. Pruett, Chief
Project Branch D
Division of Reactor Projects

Dockets: 50-528
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Enclosure:
Palo Verde Nuclear Generating Station
  Inspection/Activity Plan

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M. Fields, NRR Project Manager (MBF1)
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