



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
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August 30, 2005

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

**SUBJECT: MIDCYCLE PERFORMANCE REVIEW AND INSPECTION PLAN -
PALO VERDE NUCLEAR GENERATING STATION**

Dear Mr. Overbeck:

On August 3, 2005, the NRC staff completed its performance review of Palo Verde for the first half of the calendar year 2005 assessment cycle. Our technical staff reviewed performance indicators (PIs) for the most recent quarter and inspection results over the previous 12 months. 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 in order for you 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 letter designated and marked as "Proprietary Information in accordance with 10 CFR 2.390" will include the physical protection review and resultant inspection plan.

Plant performance for the most recent quarter for all three units was within the Degraded Cornerstone column of the NRC's Action Matrix based on a Yellow inspection finding in the Mitigating Systems cornerstone. The issue involved your discovery in July 2004, following notification from another facility where a similar problem had been identified, that a significant section of containment sump safety injection piping at all three units was void of water. The voided section of piping had the potential to prevent the fulfillment of the safety function to remove residual heat and mitigate the consequences of a loss-of-coolant accident. In response to this finding you initiated a number of investigative teams to identify the root and contributing causes of the finding and to develop corrective actions to preclude repetition. The root cause analyses were ongoing at the end of this assessment period.

On June 14, 2005, Arizona Public Service Company (APS) submitted a letter to the NRC requesting postponement of the planned NRC supplemental inspection (Inspection Procedure 95002, "Inspection for One Degraded Cornerstone or Any Three White Inputs In a Strategic Performance Area") in order to allow sufficient time to complete the root cause evaluations and develop corrective actions. Accordingly, the NRC staff will conduct the inspection in September 2005. While we agree with the basis for your request, you should recognize that the postponement of the closure of this issue and our inspection will result in the Yellow finding remaining open for a least five quarters.

In our annual assessment letter dated March 2, 2005, we advised you of a substantive crosscutting issue in the area of human performance. This substantive crosscutting issue primarily involved personnel errors (e.g., failure to follow procedures) and resource issues (e.g., inadequate procedures). During the current 12-month assessment cycle there were 18 findings of very low safety significance (Green) with human performance attributes in the Initiating Events, Mitigating Systems, Barrier Integrity, Emergency Preparedness, and Public Radiation Safety Cornerstones. The findings have the same common themes as those described in the annual assessment letter. Recent noteworthy examples included the failure of personnel to follow procedures during the operation of fuel handling equipment, an inadequate surveillance procedure which resulted in an inadvertent safety injection actuation and injection, and inadequate procedures for the operation of multiple charging pumps and a makeup pump from the refueling water storage tank. Additionally, the NRC staff identified a new causal factor involving organizational issues (e.g., communications between departments). Noteworthy examples included the inappropriate sequencing of work that resulted in a loss of vital power to one train of the engineered safety features system and the failure to promptly notify the control room of a condition that impacted the operability of the emergency core cooling system.

In our March 2, 2005, annual assessment letter we also advised you of a substantive crosscutting issue in the area of problem identification and resolution. This substantive crosscutting issue involved implementation problems associated with identifying problems and entering them in the corrective action program, evaluating conditions in the corrective action program, and implementing effective corrective actions. During the current 12-month assessment cycle there were 20 findings of very low safety significance (Green) with problem identification and resolution attributes in the Initiating Events, Mitigating Systems, and Barrier Integrity Cornerstones. These findings have the same common themes as those described in the annual assessment letter. Recent noteworthy examples included the failure to implement corrective actions to preclude the failure of gasket retaining bolts on emergency core cooling system valves, the failure of personnel to suspend spent fuel movements upon discovery of a degraded condition, and the failure to revise procedures to ensure auxiliary feedwater check valves were appropriately tested.

Your staff initiated several reviews to determine the root cause analyses of the underlying performance deficiencies and to develop corrective actions to improve performance in these substantive crosscutting areas. The root cause analyses were ongoing at the end of the assessment period. We noted that, while you have implemented some corrective actions to improve performance, these activities were not fully effective in developing a continuing performance improvement trend. Therefore, both substantive crosscutting areas will remain open. We will continue to monitor your actions to address the crosscutting areas through implementation of the resident inspector baseline inspection program and during the January 2006 biannual problem identification and resolution inspection. The closure of these issues will be based on the thoroughness of your root cause evaluations and whether your corrective actions are successful in improving performance within the specific areas previously discussed.

The March 2, 2005, annual assessment letter discussed aspects of your actions to enhance the safety conscious work environment at Palo Verde. Additionally, the results of a Palo Verde employee survey completed in March 2005 were discussed with the NRC during public

meetings conducted on April 5, 2005, and August 18, 2005. The results of the survey indicated that, with some exceptions, there has been improvement in the work environment and employee willingness to raise safety issues. As discussed during the August 18, 2005, meeting, there were some conflicting elements within the survey results (e.g., statistical results of survey questions relative to write-in comments) and the results indicate some pockets of potential issues needing further action on your part. We understand the steps you are planning to take to address these and will continue to conduct focused reviews of your activities within this area as part of our implementation of the baseline inspection program.

On April 8, 2005, the staff issued a Severity Level III violation and proposed imposition of a \$50,000 civil penalty in accordance with the NRC's Enforcement Policy. The violation involved the NRC's identification of a failure to perform a 10 CFR 50.59 safety evaluation and receive prior NRC approval of a change to Procedure 41ST-1SI09, "ECCS (emergency core cooling system) Leak Test." This change resulted in the draining of ECCS suction piping from the containment sump following local leak rate testing. If an evaluation had been performed in 1992, then it would have led to a conclusion that the change was contrary to the description of the facility in the Updated Final Safety Analysis Report and that such a change would have required NRC review and approval prior to implementation. In response to this finding, you initiated several investigative teams to identify the root and contributing causes of the finding and to develop corrective actions to preclude repetition. The root cause analyses were ongoing at the end of the assessment period. The NRC staff will conduct an inspection of your root cause analyses and corrective actions during the September 2005 planned supplemental inspection.

On June 27, 2005, the staff issued a Severity Level III violation in accordance with the NRC's Enforcement Policy. The violation involved the NRC's identification of a change to the Palo Verde Emergency Plan without prior Commission approval, which decreased the plan's effectiveness. The change involved the removal of a classifiable condition from two emergency action level (EAL) definitions, which made the EALs technically inaccurate and unable to be implemented as written. In response to the finding, APS made revisions to the Emergency Plan to correct the discrepancies, added staffing to the emergency planning department to ensure appropriate reviews of changes to the Emergency Plan were conducted, and completed a review of the change process for the Security Plan, Quality Assurance Program, and Fire Protection plans. The NRC staff will conduct an inspection of your root cause analyses and corrective actions prior to the annual assessment review in February 2006.

The enclosed inspection plan details the inspections, except those related to physical protection, scheduled through March 31, 2007. In addition to the baseline inspections, NRC will also be implementing Inspection Procedure 50001, "Steam Generator Replacement Inspection," relative to the planned replacement of the Unit 1 steam generators. The inspection plan is provided to minimize the resource impact on your staff and to allow for the early resolution of any scheduling conflicts and personnel availability issues well 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 end-of-cycle 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 Publically Available Records (PARS) component of the 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 the inspection plan, we will contact you to discuss the change as soon as possible. Please contact Troy W. Pruett at (817) 860-8173 with any questions you may have regarding this letter or the inspection plan.

Sincerely,



Bruce S. Mallett
Regional Administrator

Dockets: 50-528
50-529
50-530
Licenses: NPF-41
NPF-51
NPF-74

Enclosure:
Palo Verde Inspection/Activity Plan

cc w/enclosure:

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| Unit Number | Inspection Activity | Title | No. of Staff on Site | Planned Dates Start | Planned Dates End | Inspection Type |
|-------------|---|---|----------------------|---------------------|-------------------|----------------------|
| 1, 2, 3 | OB-RQ - PV REQUALIFICATION INSP | | 3 | | | |
| | IP 7111111B | Licensed Operator Requalification Program | | 08/07/2006 | 08/11/2006 | Baseline Inspections |
| 1, 2, 3 | PEB-05T - TRIENNIAL FIRE PROTECTION | | 3 | | | |
| | IP 7111105T | Fire Protection [Triennial] | | 09/11/2006 | 09/15/2006 | Baseline Inspections |
| 1, 2, 3 | IP 7111105T | Fire Protection [Triennial] | | 09/25/2006 | 09/29/2006 | Baseline Inspections |
| 2 | EB08 - ISI-P | | 1 | | | |
| | IP 7111108P | Inservice Inspection Activities - PWR | | 10/02/2006 | 11/03/2006 | Baseline Inspections |
| 1, 2, 3 | ALARA2 - ALARA PLANNING AND CONTROLS | | 1 | | | |
| | IP 7112102 | ALARA Planning and Controls | | 01/08/2007 | 01/12/2007 | Baseline Inspections |
| 1, 2 | 12B - MAINTENANCE RULE INSPECTION | | 2 | | | |
| | IP 7111112B | Maintenance Effectiveness | | 01/22/2007 | 01/26/2007 | Baseline Inspections |
| 1, 2, 3 | RP TEAM - RADIATION SAFETY TEAM | | 5 | | | |
| | IP 7112103 | Radiation Monitoring Instrumentation and Protective Equipment | | 01/29/2007 | 02/02/2007 | Baseline Inspections |
| 1, 2, 3 | IP 7112201 | Radioactive Gaseous and Liquid Effluent Treatment and Monitoring Systems | | 01/29/2007 | 02/02/2007 | Baseline Inspections |
| 1, 2, 3 | IP 7112202 | Radioactive Material Processing and Transportation | | 01/29/2007 | 02/02/2007 | Baseline Inspections |
| 1, 2, 3 | IP 7112203 | Radiological Environmental Monitoring Program (REMP) And Radioactive Material Control F | | 01/29/2007 | 02/02/2007 | Baseline Inspections |
| 1, 2, 3 | EP1 - PV EP EXERCISE | | 3 | | | |
| | IP 7111401 | Exercise Evaluation | | 03/05/2007 | 03/09/2007 | Baseline Inspections |
| 1, 2, 3 | EB02/21 - 50.59 & PERMANENT PLANT MODS | | 3 | | | |
| | IP 7111102 | Evaluation of Changes, Tests, or Experiments | | 03/12/2007 | 03/16/2007 | Baseline Inspections |
| 1, 2, 3 | IP 7111117B | Permanent Plant Modifications | | 03/12/2007 | 03/16/2007 | Baseline Inspections |
| 1, 2, 3 | ACRSA - ACCESS CONTROL TO RAD AREAS | | 1 | | | |
| | IP 7112101 | Access Control to Radiologically Significant Areas | | 04/09/2007 | 04/09/2007 | Baseline Inspections |

| Unit Number | Inspection Activity | Title | No. of Staff on Site | Planned Dates Start | Planned Dates End | Inspection Type |
|-------------|--|--|----------------------|---------------------|-------------------|-----------------------|
| 1 | SG REPL - U1 STEAM GEN REPLACEMENT | | 4 | | | |
| | IP 50001 | Steam Generator Replacement Inspection | | 02/28/2005 | 12/31/2005 | Other Routine |
| 1, 2, 3 | SUP INSP - 95002 SUPPLEMENTAL INSP | | 6 | | | |
| | IP 95002 | Inspection For One Degraded Cornerstone Or Any Three White Inputs In A Strategic Perform | | 09/12/2005 | 09/16/2005 | Supplemental Progra |
| 1, 2, 3 | IP 95002 | Inspection For One Degraded Cornerstone Or Any Three White Inputs In A Strategic Perform | | 09/26/2005 | 09/30/2005 | Supplemental P Progra |
| 1 | OB-INIT - INITIAL EXAM | | 3 | | | |
| | X02282 | PALO VERDE UNIT1 (05/05) INITIAL EXAM | | 08/01/2005 | 08/05/2005 | Not Applicable |
| 2 | X02283 | PALO VERDE UNIT 2 (11/05) - INITIAL EXAM | | 08/01/2005 | 08/05/2005 | Not Applicable |
| 3 | X02284 | PALO VERDE UNIT 3 (11/05) - INITIAL EXAM | | 08/01/2005 | 08/05/2005 | Not Applicable |
| 1 | EB08P - ISI U1 - VESS VOL (TI 150/152) AS REQ | | 2 | | | |
| | IP 7111108P | Inservice Inspection Activities - PWR | | 10/18/2005 | 10/27/2005 | Baseline Inspections |
| 1 | IP 2515/160 | Pzr Pene Nozzles & Strm Space Piping Connections in U.S. PWRs [NRC Bulletin 2004-01] | | 11/14/2005 | 12/02/2005 | Safety Issues |
| 1, 2, 3 | ACRSA - ACCESS CONTROL TO RAD SIGNIFICANT AREAS | | 1 | | | |
| | IP 7112101 | Access Control to Radiologically Significant Areas | | 10/17/2005 | 10/21/2005 | Baseline Inspections |
| 1, 2, 3 | 711152B - PV PIR INSPECTION | | 7 | | | |
| | IP 711152B | Identification and Resolution of Problems | | 01/09/2006 | 01/13/2006 | Baseline Inspections |
| 1, 2, 3 | IP 71152B | Identification and Resolution of Problems | | 01/23/2006 | 01/27/2006 | Baseline Inspections |
| 1, 2, 3 | OB-EP2 - EMERG PREPAREDNESS PROGRAM INSPECTION | | 1 | | | |
| | IP 7111402 | Alert and Notification System Testing | | 01/23/2006 | 01/27/2006 | Baseline Inspections |
| 1, 2, 3 | IP 7111403 | Emergency Response Organization Augmentation Testing | | 01/23/2006 | 01/27/2006 | Baseline Inspections |
| 1, 2, 3 | IP 7111404 | Emergency Action Level and Emergency Plan Changes | | 01/23/2006 | 01/27/2006 | Baseline Inspections |
| 1, 2, 3 | IP 7111405 | Correction of Emergency Preparedness Weaknesses and Deficiencies | | 01/23/2006 | 01/27/2006 | Baseline Inspections |
| 1, 2, 3 | IP 711151 | Performance Indicator Verification | | 01/23/2006 | 01/27/2006 | Baseline Inspections |
| 1, 2, 3 | ALARA1 - ALARA PLANNING AND CONTROLS | | 1 | | | |
| | IP 7112102 | ALARA Planning and Controls | | 02/13/2006 | 02/17/2006 | Baseline Inspections |
| 2 | EB08 - U3-ISI | | 1 | | | |
| | IP 7111108P | Inservice Inspection Activities - PWR | | 04/03/2006 | 05/05/2006 | Baseline Inspections |
| 1, 2, 3 | ACRSA - ACCESS CONTROL TO RAD SIGNIFICANT AREAS | | 1 | | | |
| | IP 7112101 | Access Control to Radiologically Significant Areas | | 04/10/2006 | 04/14/2006 | Baseline Inspections |
| 1, 2, 3 | PEB - HX PERFORMANCE | | 1 | | | |
| | IP 711107B | Heat Sink Performance | | 06/05/2006 | 06/09/2006 | Baseline Inspections |
| 1, 2, 3 | EB21 - ENG-SSD&PC | | 5 | | | |
| | IP 7111121 | Safety System Design and Performance Capability | | 07/31/2006 | 08/04/2006 | Baseline Inspections |
| 1, 2, 3 | IP 7111121 | Safety System Design and Performance Capability | | 08/14/2006 | 08/18/2006 | Baseline Inspections |
| 1, 2, 3 | IP 7111121 | Safety System Design and Performance Capability | | 08/21/2006 | 08/25/2006 | Baseline Inspections |

This report does not include INPO and OUTAGE activities.
This report shows only on-site and announced inspection procedures.

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SISP Review Completed: BSM ADAMS: Yes No Initials: BSM
 Publicly Available Non-Publicly Available Sensitive Non-Sensitive

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