UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
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August 31, 2007

Randall K. Edington
Senior Vice President, Nuclear
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SUBJECT: MIDCYCLE PERFORMANCE REVIEW AND INSPECTION PLAN - PALO VERDE NUCLEAR GENERATING STATION

Dear Mr. Edington:

On August 9, 2007, the NRC staff completed its performance review of Palo Verde Nuclear Generating Station (PVNGS) for the first half of the calendar year 2007 assessment cycle. Our technical staff reviewed performance indicators 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.

This performance review and enclosed inspection plan do not include security information. A separate letter designated and marked as "Official Use Only - Security-Related Information" will include the security cornerstone review and resultant inspection plan.

The NRC continues to assess the performance of PVNGS as being in the Multiple/Repetitive Degraded Cornerstone column (Column 4) of the NRC's Action Matrix. Technically, only Unit 3's performance is in Column 4, as described below; however, we are evaluating your corrective actions to address performance issues for the entire site, since the root and contributing causes for the White and Yellow findings are programmatic and site-wide. Plant performance for Units 1 and 2 for the most recent quarter was technically within the Degraded Cornerstone column of the NRC's Action matrix based on one Yellow finding, open since the fourth quarter of 2004, in the Mitigating Systems cornerstone. The finding involved a significant section of containment sump safety injection piping that was void of water at all three PVNGS units, which could have impacted the ability of emergency core cooling system to perform its safety function. Plant performance for Unit 3 for the most recent quarter was in Column 4 of the NRC's Action Matrix based on one Yellow finding, open since the fourth quarter of 2004, in the Mitigating Systems cornerstone (discussed above), and one White finding in the Mitigating Systems cornerstone associated with failure of the Unit 3, Train A emergency diesel generator K-1 relay.

The NRC increased regulatory oversight of PVNGS in response to your entering Column 4 of the NRC's Action Matrix through increased inspections and NRC management involvement in monitoring activities at PVNGS. Regarding the increased inspections, in addition to performing

baseline inspections, the NRC has commenced Inspection Procedure (IP) 95003, "Supplemental Inspection for Repetitive Degraded Cornerstones, Multiple Degraded Cornerstones, Multiple Yellow Inputs, or One Red Input." The onsite review portion of the IP 95003 supplemental inspection should conclude in November 2007.

You have made progress in evaluating root and contributing causes and implementing actions to address performance issues at PVNGS since our March 2, 2007, annual assessment letter. Several meetings have been held to discuss performance concerns and actions being taken to improve performance at PVNGS. On April 2, 2007, the NRC held the annual performance assessment meeting near PVNGS. The meeting was attended by the Deputy Executive Director for Reactor and Preparedness Programs. On April 18, 2007, senior NRC management discussed PVNGS performance issues at the Agency Action Review Meeting and subsequently the NRC Commissioners were briefed on the results. On June 6, 2007, we held a public meeting in Tonopah, Arizona, to discuss actions being taken by Arizona Public Service Company (APS) to develop an integrated performance improvement plan, which included plans being developed to address the two substantive cross-cutting issues (discussed in detail below). On July 24, 2007, an NRC Commission meeting was held with Utility and PVNGS site senior executives to discuss the performance concerns at PVNGS. At the meeting, you explained the process associated with evaluating the root and contributing causes of the performance decline at PVNGS, and highlighted key improvement initiatives to be included in your site integrated improvement plan.

On June 21, 2007, we issued a Confirmatory Action Letter to APS to confirm initial actions and the approach to address these actions, based on the reviews you had completed prior to that point. The Confirmatory Action Letter confirms that APS will complete actions to address the root and contributing causes of the Yellow and White findings described above; that APS will complete corrective actions to sustain improved performance in the cross-cutting areas of human performance and problem identification and resolution; that APS will complete an independent safety culture assessment and incorporate the results into an improvement plan; and that APS will submit portions of its improvement plan that relate to the Reactor Safety strategic performance area to the NRC by November 30, 2007. While the actions specified in the letter may need to be updated as you and the NRC complete our reviews, these actions are the first step in addressing performance problems at PVNGS.

In the previous five consecutive assessment letters since March 2, 2005, we have advised you of substantive cross-cutting issues in the areas of human performance and problem identification and resolution. During this assessment, we have concluded that both of these substantive cross-cutting issues should remain open. In the human performance area, the NRC identified 23 Green findings and one example of a White finding involving the Initiating Events, Mitigating Systems, Barrier Integrity, Public Radiation Safety, and Occupational Radiation Safety cornerstones. Cross-cutting themes were identified in the components of decision-making (ineffective use of conservative assumptions), resources (inadequate procedures and instructions), and work practices (failure to follow procedures). Many of the findings involved instances of failing to adequately assess operability of nonconforming and degraded conditions of safety-related systems and components; failing to follow procedures; and failing to implement adequate procedures and work instructions. These performance deficiencies have resulted in challenges to plant operations.

In the problem identification and resolution cross-cutting area, the NRC identified 13 examples of Green findings and one example of a White finding involving the Initiating Events and Mitigating Systems cornerstones. A cross-cutting theme was identified in the corrective action program component involving the failure to identify degraded conditions and inadequate evaluations of degraded conditions and extent of conditions. Many of the findings involved instances of failing to identify and correct degraded material conditions; addressing the symptoms of problems and failing to address the root causes of issues; not performing timely and thorough evaluations of conditions adverse to quality; and ineffective resolution of emerging technical issues. These performance deficiencies have resulted in degraded safety-related systems and components, repetitive events and conditions, latent failures of safety-related equipment, and insufficiently controlled work instructions.

During the assessment period, the NRC performed periodic reviews of your corrective actions to address both cross-cutting areas. You have taken corrective actions; however, these actions either have not been completely effective, are still being developed, or are only partially implemented. The NRC has noted that continued problems in the human performance and problem identification and resolution cross-cutting areas were reflected in the continuing occurrence of challenges to plant operations. We understand that as a part of your integrated plant performance improvement initiative you are developing actions to improve performance in these cross-cutting areas. The above cross-cutting areas will remain open until we determine that corrective actions implemented in accordance with your site integrated improvement plan are appropriate, that the corrective actions have demonstrated sustained improved performance, there are no new greater than green findings, and there are a small number of green findings with common cross-cutting themes.

The enclosed inspection plan details the inspections, including Temporary Instructions, through December 31, 2008, except for those inspections related to security. The NRC will perform Temporary Instruction 2515/166, "Pressurized Water Reactor Containment Sump Blockage," in Unit 3 in the fall of 2007, and complete the closeout of Temporary Instruction 2515/166 for all three units in early 2008. In addition to baseline inspections, the NRC will also be implementing Inspection Procedure 50001, "Steam Generator Replacement Inspection," relative to the planned replacement of the Unit 3 steam generators. We plan to address underlying performance deficiencies associated with both the Yellow and White findings, discussed above, during the 95003 supplemental inspection. The inspection plan is provided to allow for the 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 review.

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).

The NRC is currently evaluating the scope and frequency of all the baseline inspection procedures. If the results of the evaluation, or any other circumstances, cause us to change the inspection plan, we will contact you to discuss the change as soon as possible. Please contact Mr. 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 Nuclear Generating Station Inspection/Activity Plan

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SUNSI Review Completed: _TWP___ ADAMS: √ Yes ☐ No Initials: TWP

√ Publicly Available ☐ Non-Publicly Available ☐ Sensitive √ Non-Sensitive
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SPE/DRP/D	C:DRP/D	D:DRS	D:DRP	DRA
RLNease;mjs	TWPruett	DDChamberlain	ATHowell	TPGwynn
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BSMallett			
BSM			
8/30/07			

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Palo Verde
Inspection / Activity Plan
09/01/2007 - 12/31/2008

Unit Number	Inspection Activity	Title	No. of Staff on Site	Planned Dates Start	Planned Dates End	Inspection Type
	SG REP	**- U3 SG REPLACEMENT ACTIVITIES**	**1**			
3	IP 50001	Steam Generator Replacement Inspection		01/01/2007	12/31/2007	Other Routine
	95003	**- 95003 SUPP INSP**	**22**			
1, 2, 3	IP 95003	Inspection For Repetitive Degraded Cornerstones, Multiple Degraded Cornerstones, Multiple		10/01/2007	10/12/2007	Supplemental Progra
1, 2, 3	IP 95003	Inspection For Repetitive Degraded Cornerstones, Multiple Degraded Cornerstones, Multiple		10/29/2007	11/02/2007	Supplemental Progra
	EB1-08P	**- ISI U3 & TI 166**	**1**			
3	IP 2515/166	Pressurized Water Reactor Containment Sump Blockage [NRC GENERIC LETTER 2004-0		10/01/2007	10/12/2007	Safety Issues
3	IP 7111108P	Inservice Inspection Activities - PWR		10/01/2007	10/12/2007	Baseline Inspections
	RP-ORS4	**- OCCUPATIONAL RADIATION SAFETY-ACCESS**	**1**			
1, 2, 3	IP 7112101	Access Control to Radiologically Significant Areas		10/21/2007	10/21/2007	Baseline Inspections
1, 2, 3	IP 7112102	ALARA Planning and Controls		10/21/2007	10/21/2007	Baseline Inspections
1, 2, 3	IP 71151	Performance Indicator Verification		10/21/2007	10/21/2007	Baseline Inspections
	RP-ORS5	**- OCCUPATIONAL RADIATION SAFETY-ALARA**	**1**			
1, 2, 3	IP 7112101	Access Control to Radiologically Significant Areas		11/26/2007	11/30/2007	Baseline Inspections
1, 2, 3	IP 7112102	ALARA Planning and Controls		11/26/2007	11/30/2007	Baseline Inspections
1, 2, 3	IP 71151	Performance Indicator Verification		11/26/2007	11/30/2007	Baseline Inspections
	EP2	**- EP PROGRAM**	**1**			
1, 2, 3	IP 7111402	Alert and Notification System Testing		02/11/2008	02/15/2008	Baseline Inspections
1, 2, 3	IP 7111403	Emergency Response Organization Augmentation Testing		02/11/2008	02/15/2008	Baseline Inspections
1, 2, 3	IP 7111404	Emergency Action Level and Emergency Plan Changes		02/11/2008	02/15/2008	Baseline Inspections
1, 2, 3	IP 7111405	Correction of Emergency Preparedness Weaknesses and Deficiencies		02/11/2008	02/15/2008	Baseline Inspections
1, 2, 3	IP 71151	Performance Indicator Verification		02/11/2008	02/15/2008	Baseline Inspections
	RP-ORS1	**- OCCUPATIONAL RADIATION SAFETY - ALARA**	**1**			
1, 2, 3	IP 7112101	Access Control to Radiologically Significant Areas		02/11/2008	02/15/2008	Baseline Inspections
1, 2, 3	IP 7112102	ALARA Planning and Controls		02/11/2008	02/15/2008	Baseline Inspections
2, 3	IP 71151-OR01	Occupational Exposure Control Effectiveness		02/11/2008	02/15/2008	Baseline Inspections
1	IP 71151-PR01	RETS/ODCM Radiological Effluent		02/11/2008	02/15/2008	Baseline Inspections
	EB2-07B	**- BIENNIAL HEAT SINK INSPECTION**	**1**			
1, 2, 3	IP 7111107B	Heat Sink Performance		02/25/2008	02/29/2008	Baseline Inspections
	EB1-08U2	**- ISI PV U2 & TI 166 CLOSEOUT U1/2/3**	**2**			
1, 2, 3	IP 2515/166	Pressurized Water Reactor Containment Sump Blockage [NRC GENERIC LETTER 2004-0		04/07/2008	04/11/2008	Safety Issues
2	IP 7111108P	Inservice Inspection Activities - PWR		04/07/2008	04/11/2008	Baseline Inspections
2	IP 7111108P	Inservice Inspection Activities - PWR		04/21/2008	04/25/2008	Baseline Inspections

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

Palo Verde
Inspection / Activity Plan
09/01/2007 - 12/31/2008

Unit Number	Inspection Activity	Title	No. of Staff on Site	Planned Dates Start	Planned Dates End	Inspection Type
	RP-ORS2	**- OCCUPATIONAL RADIATION SAFETY - ACCESS**	**1**			
1, 2, 3	IP 7112101	Access Control to Radiologically Significant Areas		04/28/2008	05/02/2008	Baseline Inspections
1, 2, 3	IP 7112102	ALARA Planning and Controls		04/28/2008	05/02/2008	Baseline Inspections
1	IP 71151-OR01	Occupational Exposure Control Effectiveness		04/28/2008	05/02/2008	Baseline Inspections
3	IP 71151-PR01	RETS/ODCM Radiological Effluent		04/28/2008	05/02/2008	Baseline Inspections
	EB2-52B	**- BIENNIAL PI&R INSPECTION**	**4**			
1, 2, 3	IP 71152B	Identification and Resolution of Problems		06/09/2008	06/13/2008	Baseline Inspections
1, 2, 3	IP 71152B	Identification and Resolution of Problems		06/23/2008	06/27/2008	Baseline Inspections
	EB2-12T	**- TRIENNIAL MAINTENANCE RULE INSPECTION**	**1**			
1, 2, 3	IP 7111112B	Maintenance Effectiveness		07/21/2008	07/25/2008	Baseline Inspections
	EB1-21	**- CDBI**	**9**			
1, 2, 3	IP 7111121	Component Design Bases Inspection		08/11/2008	08/15/2008	Baseline Inspections
1, 2, 3	IP 7111121	Component Design Bases Inspection		08/25/2008	09/05/2008	Baseline Inspections
	REQUAL	**- BIENNIAL REQUAL**	**3**			
1, 2, 3	IP 7111111B	Licensed Operator Requalification Program		09/29/2008	10/03/2008	Baseline Inspections
	RP-ORS3	**- OCCUPATIONAL RADIATION SAFETY - ALARA**	**1**			
1, 2, 3	IP 7112101	Access Control to Radiologically Significant Areas		09/29/2008	10/03/2008	Baseline Inspections
1, 2, 3	IP 7112102	ALARA Planning and Controls		09/29/2008	10/03/2008	Baseline Inspections
1	IP 71151-OR01	Occupational Exposure Control Effectiveness		09/29/2008	10/03/2008	Baseline Inspections
2	IP 71151-PR01	RETS/ODCM Radiological Effluent		09/29/2008	10/03/2008	Baseline Inspections
	EB1-08U1	**- INSERVICE INSPECTION ACTIVITIES PV U1**	**1**			
1	IP 7111108P	Inservice Inspection Activities - PWR		10/13/2008	10/17/2008	Baseline Inspections
1	IP 7111108P	Inservice Inspection Activities - PWR		10/27/2008	10/31/2008	Baseline Inspections
	EXAM	**- INITIAL EXAMINATION**	**5**			
1	X02383	PALO VERDE UNIT 1-INITIAL EXAM (11/2008)		10/06/2008	10/10/2008	Not Applicable
1	X02383	PALO VERDE UNIT 1-INITIAL EXAM (11/2008)		11/10/2008	11/21/2008	Not Applicable

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This report shows only on-site and announced inspection procedures.