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Document Control Branch (Document Control Desk)

SUBJECT: Responds to NRC 980416 ltr re violations noted in insp repts  
50-528/98-12,50-529/98-12 & 50-530/98-12.Corrective actions:  
addl evaluation of reason for incorrect surveillance test  
procedure has been completed.

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102-04124-JMLAKK/REB  
May 15, 1998

U. S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
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Dear Sirs:

**Subject: Palo Verde Nuclear Generating Station (PVNGS)**  
**Units 1, 2, and 3**  
**Docket Nos. STN 50-528/529/530**  
**Reply to Notices of Violation 9812-01 and 9812-04.**

Arizona Public Service Company (APS) has reviewed NRC Inspection Report 50-528/529/530/98-12 and the Notices of Violation (NOV) dated April 16, 1998. Pursuant to the provisions of 10 CFR 2.201, APS' response is enclosed. Enclosure 1 to this letter is a restatement of the NOV. APS' response is provided in Enclosure 2.

The following commitments are being made to the NRC in this letter:

1. The Work Document Development and Control procedure will be revised to clarify when a transportability CRDR is required to be initiated.
  2. Engineering management will review and revise the appropriate procedure to clarify the criteria for issuing a CRDR when further evaluation of repetitive failures is warranted even though a functional failure may not have occurred.
  3. Specialty Engineering ISI personnel will be provided additional training on CRDR initiation requirements and revised management expectations.
  4. For the first example of violation A, the evaluator will be restricted from performing root cause evaluations until management is satisfied that investigations will meet procedural requirements and management expectations.
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Should you have any further questions, please contact Ms. Angela K. Krainik at (602) 393-5421.

Sincerely,

*Maggie M. Perkins*  
*for JML*

JML/AKK/REB/rh

Enclosures

1. Restatement of Notice of Violation
2. Reply to Notice of Violation

cc: E. W. Merschoff  
K. E. Perkins  
M. B. Fields  
J. H. Moorman



**ENCLOSURE 1**

**RESTATEMENT OF NOTICES OF VIOLATION**

**50-528/529/530/98-12-01 AND 04**

**NRC INSPECTION CONDUCTED FEBRUARY 17 THROUGH**

**APRIL 9, 1998**

**INSPECTION REPORT NO. 50-528/529/530/98-12**





## RESTATEMENT OF NOTICES OF VIOLATION (50-529/528/530/98-12-01 and 04)

During an NRC inspection conducted on February 17-27, 1998, with inoffice inspection from February 29 to April 9, 1998, two violations of NRC requirements was identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," NUREG-1600, the violations are listed below:

10CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures and Drawings," requires that activities affecting quality be accomplished in accordance with instruction, procedures, and drawings.

The approved Quality Assurance Program Description PD-0AP01, "PVNGS Administrative Control Program," Chapter 1.0, Revision 2, states, in part, "Procedures shall be used as appropriate." Chapter 17.0, Revision 1, states, in part, "the work control process is used to identify and correct hardware deficiencies using Work Request documents." Chapter 17.0 also defines an adverse condition as any condition which adversely affects the safe and reliable production of electricity such as failures, malfunction, deficiencies, deviations, defective material and equipment. The implementing procedures for these requirements are 90DP-0IP10, "Condition reporting," Revision 1, and 30DP-PWP02, "Work Document Development and Control," Revision 23.

- A. Procedure 90DP-0IP10, Step 3.1.2, states, in part, that if a condition may cause a degraded or nonconforming condition in a plant system, the identifier of the condition (originator) must promptly notify the shift supervisor of the affected unit.

Procedure 90DP-0IP10, Step 3.1.3, states, in part, that the identifier of a condition will complete a condition report/disposition request and submit the form to his/her lead (supervisor) by the end of the shift.

Procedure 90DP-0IP10, Step 3.6.2, states that, for significant condition reports/disposition requests, "the CRDR Owner shall complete a Root Cause Investigation, identify the root cause(s), if possible, and implement corrective actions to prevent recurrence."

Contrary to the above,

1. On September 19, 1997, when Unit 2 Licensee Event Report 50-529/97-004 was issued, and on October 15, 1997, when significant Condition Report/Disposition request 270271 was issued, the licensee failed to identify, in accordance with Procedure 90DP-0IP10, Step 3.6.2, the root cause for a procedure writer, a reviewer, and a management representative failing to include the proper acceptance criterion for the



power channel check Surveillance Procedure 40ST-9ZZ34, "Standard Full Power Surveillance."

2. On October 28, 1997, licensee engineers failed to identify a degraded condition in accordance with Procedure 90DP-0IP10, Steps 3.1.2 and 3.1.3, to promptly notify the shift supervisor of the affected unit (Unit 2), complete a condition report/disposition request, and provide information to their supervisor, by the end of the shift, involving the discovery of tests, required by ASME Section XI and technical specifications, which had not been performed on Unit 2 components for either the first or second inspection period of the first interval.

This is a Severity Level IV violation (Supplement I) (50-528, -529, -530/9812-01).

- B. Procedure 30DP-PWP02 (sic), paragraph 3.2.2.3, requires that work shall be reviewed to determine if evaluations for transportability are potentially required and documented on a condition report/disposition request.

Contrary to the above, from December 19, 1995, through November 18, 1997, the licensee failed to review to determine if evaluations for transportability were required and initiate a condition report/disposition request for 27 failures (e.g. slow response) of the free air regulators for the instrument air system. These failures were adverse conditions because a malfunction or defect in the instrument air system could affect the safe and reliable production of power, for example, by loss of auxiliary feedwater, atmospheric dump, and steam generator systems.

This is a Severity Level IV violation (Supplement I) (50-528, -529, -530/9812-04)



**ENCLOSURE 2**

**REPLY TO NOTICES OF VIOLATION**

**50-528/529/530/98-12-01and 04**

**NRC INSPECTION CONDUCTED FEBURARY 17 THROUGH**

**APRIL 9, 1998**

**INSPECTION REPORT NO. 50-528/529/530/98-12**



**REPLY TO NOTICE OF VIOLATION (50-528/529/530/98-12-01)**

**Reason For The Violation**

APS accepts the violation. Two examples were cited in the inspection report for failure to follow the Condition Report/Disposition Request (CRDR) procedure. In the first example, a significant condition investigation did not adequately identify the root cause of a procedure error. The significant investigation report, which was related to incorrect acceptance criteria in a surveillance test (ST) procedure (Standard Full Power Surveillance, 40ST-9ZZ34), identified the root cause as " the procedure writer did not include the proper acceptance criteria for power operation below 80% in the original issue of 40ST-9ZZ34." No reason was given as to why the procedure writer and technical reviewer did not identify the procedure error.

A follow-up investigation of the original root cause evaluation determined that the failure to identify the root cause of a procedure error was an isolated example. The reason for the inadequate root cause investigation was that the root cause evaluator failed to adequately document the original evaluation facts and conclusions. The follow-up investigation included reviews of the root cause evaluation procedure, training, and interviews with trainers and root cause evaluators to validate that this example was not a result of a programmatic issue and was an isolated occurrence





The subsequent investigation, by different personnel, into the incorrect acceptance criteria concluded that the reason was a mind set by the procedure writer that the ST procedure would only be used with the unit at full power as the title suggests. However, the procedure objective stated the procedure was applicable in Mode 1 (5% - 100% power). Interviews with the Technical Reviewer of the procedure change were not successful in identifying a cause for the technical review not identifying the error. The procedure approver, a management review, was not required to verify the technical accuracy of the document and therefore was not a factor in this event. The purpose of the management review is to determine factors such as training needs and scheduling of effective dates.

In the second example, APS Specialty Engineering In Service Inspection (ISI) personnel did not initiate a condition report/disposition request (CRDR) when they discovered on October 28, 1997, that Section XI inspection required by the technical specifications had not been completed in Unit 2 for the Nuclear Cooling Water system. The personnel involved understood that they would need to prepare a CRDR. However, they thought a CRDR was not required to be initiated until the full inspection scope and transportability of this issue (including Units 1 and 3) were determined. On December 17, 1997, CRDR 971899 was initiated by Specialty Engineering personnel to document the missed Section XI tests.

The reasons for the delay in initiating a CRDR at the time of discovery are a lack of thorough understanding in reportability determinations and inadequate sensitivity to the



corrective action process for Specialty Engineering ISI personnel. In addition, Specialty Engineering management did not ensure that the goals and expectations were clear to the Specialty Engineering ISI group for timely preparation of the CRDR to document identified problems with the Inservice Inspection program.

#### **Corrective Steps That Have Been Taken and Results Achieved**

For the first example, an additional evaluation of the reason for the incorrect ST procedure has been completed. This evaluation determined that the reason was a mind set by the procedure writer that the ST procedure would only be used with the unit at full power. The ST procedure has been reviewed for all applicable surveillance requirements that are power dependent and has been revised to include guidance for those that are power dependent. Corrective actions reported in Unit 2 Licensee Event Report 50-529/97-004 remain adequate to prevent recurrence of the condition reported in the Licensee Event Report. In addition, the lead investigator has been restricted from performing root cause investigations.

For the second example, a CRDR (980160) was initiated to determine the cause for the delay in initiating a CRDR when it was identified that Section XI inspection had not been completed as required by technical specifications. As a result of this CRDR, Specialty Engineering ISI personnel have been directed by management to initiate a CRDR at the time of discovery of a deficient condition. In addition, Specialty Engineering ISI personnel have been briefed on how the missed surveillance tests were tied to the technical specifications and the requirements for condition reporting.



Speciality Engineering ISI personnel have been provided training on NRC reporting requirements.

**Corrective Steps That Will Be Taken To Avoid Further Violations**

For the first example, the evaluator will be restricted from performing root cause evaluations until management is satisfied that investigations will meet procedural requirements and management expectations.

For the second example, Specialty Engineering ISI personnel will be provided additional training on CRDR initiation requirements and management expectations by June 30, 1998.

**Date When Full Compliance Will Be Achieved**

For the first example, full compliance will be achieved when CRDR 980338 is reviewed and approved which is expected by May 31, 1998.

For the second example, full compliance was achieved on December 17, 1997 when CRDR 971899 was initiated by Specialty Engineering ISI personnel to document the missed Section XI inspection on the NCW system.



REPLY TO NOTICE OF VIOLATION (50-528/529/530/98-12-04)

Reason For The Violation

APS accepts the violation. This violation is for failure to follow the Work Document Development and Control (WDDC) procedure (#30DP-9WP02) in that a CRDR was not initiated to document transportability issues related to the Instrument Air (IA) system free air regulators.

Engineering and Maintenance personnel have recognized the relatively poor performance of the IA unloader regulator assemblies for several years and a considerable amount of effort had been put forth by both Maintenance and Engineering to improve the performance of this component. The degraded performance of this component usually manifests itself in sluggish loading and unloading of the in-service air compressor. The performance of the unloader regulator has not resulted in lost or degraded instrument air header pressure. The transportability issue associated with the regulators was understood to be applicable to each compressor in all units and was being managed on a replacement basis. Because it is fairly easy to identify a poorly performing unloader regulator during a system walkdown, I&C Maintenance is generally able to remove and replace these with a rebuilt unit prior to any system failures. Since a permanent resolution would require an extensive modification, a decision was made to manage this component issue by replacing the degraded component with rebuilt components prior to system failure.





The transportability evaluation required by the WDDC procedure was intended to identify immediate concerns related to potential problems with similar equipment in the other units. There was no intent for this review to replace the Failure Data Trend (FDT) process, which is concerned with identifying repeat failures and their causes. In the example of the IA free air regulators, the individual work request transportability reviews were not necessarily expected to require a transportability CRDR however, the trend of multiple work requests over time would be expected to be identified on a CRDR as a result of the FDT process.

On a quarterly basis, the FDT reports are reviewed by the responsible System Engineers for each system to identify Functional Failures and Repeat Functional Failures in accordance with the Maintenance Rule. The guidance for these reviews is provided in a cover letter that accompanies these reports and directs a CRDR be initiated if a key safety function failed or would have failed due to the failure of the specific component. No CRDR was initiated for the multiple work orders for the free air regulators because a functional failure of the IA system had not occurred. To be a functional failure of the IA system the free air regulator would have had to cause a plant trip or a reduction in power. Engineering has subsequently determined that using only this threshold for when to initiate a CRDR was not appropriate.

The reasons for the violation are:

1. An inadequate WDDC procedure in that sufficient guidance was not provided to convey the intent of the procedure.



2. The threshold used by Engineering personnel to determine when a CRDR should be initiated due to repeat equipment problems was not adequate to meet the corrective action program.

#### **Corrective Steps That Have Been Taken and Results Achieved**

CRDR 980406 was initiated to document the IA free air regulator performance.

#### **Corrective Steps That Will Be Taken To Avoid Further Violations**

1. The Work Document Development and Control procedure will be revised by July 1, 1998, to clarify when a transportability CRDR is required to be initiated.
2. Engineering management will review and revise the appropriate procedure to clarify the criteria for issuing a CRDR when further evaluation of repetitive failures is warranted even though a functional failure may not have occurred. This will be completed by June 30, 1998.

#### **Date When Full Compliance Will Be Achieved**

Full compliance was achieved on March 18, 1998 when CRDR 980406 was initiated to document the IA free air regulator performance.