

# CATEGORY 1

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AUTH. NAME AUTHOR AFFILIATION  
 LEVINE, J.M. Arizona Public Service Co. (formerly Arizona Nuclear Power  
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SUBJECT: Responds to violations noted in insp repts 50-528/97-16,  
 50-529/97-16 & 50-530/97-16, respectively. Corrective actions:  
 revised procedures for Containment Spray Valve Verification  
 & briefed Compliance personnel on event.

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Palo Verde Nuclear  
Generating Station

James M. Levine  
Senior Vice President  
Nuclear

TEL (602)393-5300  
FAX (602)393-6077

Mail Station 7602  
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102-03996 -JML/AKK/RAS  
August 20, 1997

U. S. Nuclear Regulatory Commission  
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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 50-528;-529;-530/9719-04, and  
50-528;-529;-530/9719-06**

Arizona Public Service Company (APS) has reviewed NRC Inspection Report 50-528/529/530/97-19 and the Notices of Violation (NOV) dated July 21, 1997. Pursuant to the provisions of 10 CFR 2.201, APS' response is enclosed. Enclosure 1 to this letter is a restatement of the NOV's. Enclosure 2 contains APS' response to the violations.

Should you have any further questions, please contact Angela K. Krainik at (602) 393-5421.

Sincerely,

JML/AKK/RAS/mah

Enclosures

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

9708260006 970820  
PDR ADOCK 05000528  
Q PDR

050073





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Reply to Notices of Violation 50-528;-529;-530/9719-04 and 50-528;-529;-530/9719-06

Page 2.

cc: E. W. Merschoff  
K. E. Perkins  
D. F. Kirsch  
K. M. Thomas  
PVNGS Sr. Resident



**ENCLOSURE 1**

**RESTATEMENT OF NOTICES OF VIOLATION  
50-528; - 529; - 530/9719-04 and 50-528; - 529; - 530/9719-06**

**NRC INSPECTION CONDUCTED  
MAY 19, THROUGH JUNE 19, 1997**

**INSPECTION REPORT NO. 50-528/529/530/97-19**





## RESTATEMENT OF NOTICES OF VIOLATION

During an NRC inspection conducted on May 19 through June 19, 1997, two violations of NRC requirements were identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," NUREG-1600, the violations are listed below:

- A. 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," requires that measures shall be established to assure that conditions adverse to quality, such as failures, malfunctions, deficiencies, deviations, defective material and equipment, and nonconformances are promptly identified and corrected. In the case of significant conditions adverse to quality, the measures shall assure that the cause of the condition is determined and corrective action taken to preclude repetition.

Contrary to the above, as of on [sic] June 19, 1997, the licensee had failed to take corrective actions to identify the extent and scope of a procedural deficiency that led to a water hammer event in the Unit 3 containment spray system. The licensee determined that the cause of the event was a confusing "if/then" procedural step, which was misinterpreted by the operators. However, the licensee failed to determine whether additional "if/then" statements contained in other plant procedures could cause similar events. Following NRC identification, the licensee's review identified several other examples of confusing "if/then" statements, including an additional example in the procedure in question.

This is a Severity Level IV violation (Supplement 1)(50-528;-529;-530/9719-01<sup>1</sup>).

- B. 10 CFR 50.73(a)(2)(vii) states, in part, that the licensee shall report any event where two independent trains or channels become inoperable in a single system designed to mitigate the consequences of an accident.

Contrary to the above, on February 15, 1997, an event involving a single condition that caused two independent trains to become inoperable was not reported. This event involved surveillance tests of the main steam safety valves that resulted in 6 out of 20 of these valves failing their as-found setpoint tests with setpoints greater than their technical specification setpoint tolerance of  $\pm 3$  percent.

This is a Severity Level IV violation (Supplement 1)(50-528;-529;-530/9719-02<sup>1</sup>).

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<sup>1</sup> Per William Ang (Sr. Reactor Inspector, Engineering Branch), the actual numbers for these violations are 9719-04 and 9719-06, as identified in the body of the Inspection Report.



**ENCLOSURE 2**

**REPLY TO NOTICES OF VIOLATION  
50-528;-529;-530/9719-04 and 50-528;-529;-530/9719-06**

**NRC INSPECTION CONDUCTED  
MAY 19, THROUGH JUNE 19, 1997**

**INSPECTION REPORT NO. 50-528/529/530/97-19**



**REPLY TO NOTICE OF VIOLATION "A" (50-528;-529;-530/9719-04)**

**Reason For The Violation**

From July 21; 1995 through July 26, 1995 the Unit 2 "A" train Containment Spray (CS) system experienced water hammer events during surveillance testing. Investigation of these events revealed that air was entrapped on the discharge side of the pump. As a corrective action, changes were implemented in procedure 40OP-9SI02 "Recovery from Shutdown Cooling to Normal Operating Lineup," to provide additional guidance on which CS valves were to be vented and when the venting was to occur.

On April 25, 1997 during routine surveillance testing of the Unit 3 Train A Containment Spray (CS) pump, operators heard a loud noise when the pump was started. Based on a comparison of Emergency Response Facility Data Acquisition and Display System (ERFDADS) equipment performance data between the Unit 2 and Unit 3 events, the system engineer recommended venting the system. Operations personnel subsequently vented the CS header and engineering personnel performed a system walkdown and determined that the event did not damage plant equipment.

During the investigation of the April 25, 1997 event, it was determined that the procedural changes implemented as part of the corrective actions for the Unit 2 event, could be misinterpreted and result in the CS header not being vented. Specifically, the procedure changes required the venting of the CS system, if the Safety Injection (SI) system was being "restored from an outage/maintenance condition." Since the CS venting procedure could be performed after surveillance testing had been completed on



the SI system (not an outage/maintenance condition), it was concluded by operations personnel that the CS piping had previously been restored and venting of the CS header was not required.

After reviewing these two events, APS concurs with the NRC finding that the corrective actions implemented as a result of the Unit 2 water hammer event were ineffective in preventing recurrence of a similar event. However, APS' investigation revealed that the use of conditional type "if/then" statements was not the root cause of this event. These types of "logic" and "action" steps are routinely implemented in station Operating, Abnormal and Emergency Procedures and comprehensive training has been conducted to ensure personnel are familiar with the use of these statements.

More correctly, it was the conditional part of the procedural step (is the system being restored from an outage/maintenance condition) that caused operators to misinterpret the need to vent the CS header.

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

Unit 1, 2, and 3 procedures for Containment Spray Valve Verification have been revised to require the venting of the CS system on a monthly basis. This action was completed on June 27, 1997.





The conditional "if/then" statement was removed from 40OP-9SI02 and now requires venting of the CS system anytime there is a recovery from shutdown cooling. This action was completed on June 4, 1997.

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

Applicable procedures are being reviewed to identify instances where similar conditional statements are being used. Procedural changes will be initiated where similar conditional statements could be misinterpreted. This action will be completed by October 17, 1997.

Licensed and non-licensed Operations staff will be briefed on the importance of adequately venting systems following maintenance. This action will be completed by November 30, 1997.

**Date When Full Compliance Will Be Achieved**

The required procedural changes will be implemented by April 18, 1998.



**REPLY TO NOTICE OF VIOLATION "B" (50-528;-529;-530/9719-06)**

**Reason For The Violation**

Prior to the Unit 3 sixth refueling outage, the Main Steam Safety Valves (MSSV) were tested using the Trevitest methodology to determine the as-found setpoints. On February 11, 1997 Condition Report Disposition Request (CRDR) 370050 was written to document an out of tolerance setpoint for MSSV 3J-SGE-UV-691. The CRDR was reviewed by the CRDR Review Committee (CRC) on February 12, 1997 and was classified as a "potentially" significant condition requiring a determination if the condition represented a Maintenance Rule functional failure. On February 18, 1997 CRDR 370056 was written to document that six of the MSSVs (including 3J-SGE-UV-691) as-found setpoints were outside the tolerance allowed by Technical Specification (TS) 3.7.1. This CRDR was reviewed by the CRC on February 25, 1997 and was classified as a "potentially" significant condition requiring a safety analysis evaluation be performed in order to determine if the condition would have placed Unit 3 outside of the safety analysis. The safety analysis would also be used for determining the final CRDR classification. No review for reportability was requested by the CRC, however, the Compliance department was aware of the as-found MSSV setpoint condition.

The Maintenance Rule Determination evaluation for CRDR 370050 was completed on February 26, 1997 and concluded that no Maintenance Rule Functional Failure had occurred. The safety analysis evaluation for CRDR 370056 was completed on April 2, 1997 and revealed that the MSSV setpoint condition would not have resulted in



exceeding the primary or secondary peak pressure criteria. Both evaluations were reviewed by the CRC and the CRDRs were subsequently classified as "adverse" and root cause of failure and reportability evaluations were not required.

During the Engineering Team Inspection conducted during May and June of 1997, an NRC Inspector questioned why the MSSVs setpoint condition had not been reported pursuant to 10CFR50.73. Compliance personnel subsequently performed a reportability evaluation and determined that the condition was reportable and discovered that there were actually seven MSSVs with as-found setpoints which exceeded the TS limit. On July 7, 1997 LER 50-530/97-003-00 "Seven Main Steam Safety Valves Found Out of Tolerance Prior To Refueling Outage" was submitted to the NRC.

In evaluating this condition, APS has determined that the CRC relied on the safety analysis evaluation when determining if the condition was reportable, and did not understand that other reportability requirements could be applicable. APS also determined that Compliance personnel had an inadequate understanding of NUREG 1022, and erroneously concluded that an equipment root cause of failure analysis was required before determining reportability of the MSSV condition. Based upon a review of NRC findings and plant corrective action documents, there is no evidence to suggest this is a programmatic problem.



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

On July 31, 1997 Compliance personnel were briefed on this event and were informed of APS' position on reporting multiple safety valve (Main Steam and Pressurizer) failures.

On August 19, 1997 the Compliance department issued a letter to the CRC requesting that a reportability review be required for any instance where a MSSV or Pressurizer Relief Valve fails to meet the Technical Specification tolerances.

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

No additional corrective actions will be taken.

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

Full compliance was achieved on July 7, 1997 when APS submitted LER 50-530/97-003-00.

