Arizona Public Service Company
P.O. BOX 53999 • PHOENIX, ARIZONA 85072-3999

WILLIAM F. CONWAY
EXECUTIVE VICE PRESIDENT
NUCLEAR

102-02279-WFC/GAM
September 19, 1992

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Mail Station P1-37
Washington, DC 20555

Dear Sirs:

Subject: Palo Verde Nuclear Generating Station (PVNGS)
Units 1, 2, and 3
Docket Nos. STN 50-528/529/530
Reply to Notice of Violations 50-528/92-26-01,
50-529/92-26-02, and 50-529/92-26-03
File: 92-070-026

Arizona Public Service Company (APS) has reviewed NRC Inspection Report 50-528,529, 530/92-26. Pursuant to the provisions of 10 CFR 2.201, APS' response are enclosed. Appendix A to this letter is a restatement of the Notice of Violations. APS' responses are provided in Enclosure 1. Per a telephone conversation on August 28, 1992, between L. L. Coblentz, NRC, and T. R. Bradish, APS, the due date for this response was extended from September 14, 1992, to September 21, 1992. This extension was necessary because of mail delays transmitting the Notice of Violations.

If you should have any questions, please contact Thomas R. Bradish at (602) 393-5421.

Sincerely,

WFConway

WFC/GAM/pmm

Enclosures:

Appendix A - Restatement of Notice of Violations
Enclosure 1 - Reply to Notice of Violations

cc: J. B. Martin
J. A. Sloan

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APPENDIX A

RESTATEMENT OF NOTICE OF VIOLATIONS 50-528/92-26-01, 50-529/92-26-02, AND 50-529/92-26-03
NRC INSPECTION CONDUCTED JULY 20 - 24, 1992

INSPECTION REPORT NOS. 50-528,529 AND 530/92-26

RESTATEMENT OF NOTICE OF VIOLATIONS 50-528/92-26-01, 50-529/92-26-02 AND 50-529/92-26-03

During an NRC inspection conducted July 20 - 24, 1992, three violations of NRC requirements were identified. In accordance with the "General Statement Policy and Procedure for NRC Enforcement Action," 10 CFR Part 2, Appendix C, the violations are listed below:

A. Violation 50-529/92-26-02

10 CFR 20.203(c) requires that each high radiation area be conspicuously posted with a sign or signs bearing the radiation caution symbol and the words: "Caution High Radiation Area."

Contrary to the above, on July 24, 1992, a high radiation area near the refueling water storage tank in the Unit 2 outdoor storage yard was not posted as required.

This is a Severity Level IV violation (Supplement IV) (applicable to Unit 2).

B. Violation 50-529/92-26-03

10 CFR 20.201(b) requires that each licensee make such surveys as may be necessary to comply with the requirements of Part 20 and which are reasonable under the circumstances to evaluate the extent of radiation hazards that may be present. As defined in 10 CFR 20.201(a), "survey" means an evaluation of the radiation hazard incident to the production, use, release, disposal, or presence of radioactive materials or other sources of radiation under a specific set of conditions.

10 CFR 20.401(b) requires that records be maintained of surveys performed pursuant to 10 CFR 20.210(b).

Contrary to the above, as of July 24, 1992, the licensee had not maintained records of a survey performed to assess the radiological hazards associated with the presence of radwaste drums in a storage area adjacent to the Unit 2 refueling water storage tank.

This is a Severity Level IV violation (Supplement IV) (applicable to Unit 2).

C. Violation 50-528/92-26-01

Technical Specification (TS) 6.12 requires controls to be used for individuals entering an area in which radiation fields are greater than 100 millirem/hour but less than 1000 millirem/hour. Those controls must include either an alarming dosimeter, a portable survey instrument, or radiation protection technician (RPT) coverage.

TS 6.11 requires procedures for personnel radiation protection to be prepared consistent with 10 CFR 20, and requires that these procedures be adhered to for all activities involving personnel radiation exposure.

Licensee Procedure 75AC-9RP01, "Radiation Exposure and Access Control," Section 2.1, requires individuals to comply with all standard operating procedures, warning signs, and barriers that concern radiation or contamination control.

Contrary to the above:

1. On December 11, 1991, two workers failed to comply with a high radiation area warning sign when entering the 129' south valve gallery of the Unit 2 Auxiliary Building, in that the workers did not have alarming dosimeters, a portable survey instrument, or RPT coverage.

2. On February 4, 1992, a worker failed to comply with a high radiation area warning sign while working in the 120' liquid radwaste evaporator main recycle pump room of the Unit 2 Radwaste Building, in that the worker did not have an alarming dosimeter, a portable survey instrument, or RPT coverage.

3. On March 19, 1992, four workers failed to comply with a high radiation area warning sign while working in the 70' "B" shutdown cooling heat exchanger room of the Unit Auxiliary Building, in that the workers did not have alarming dosimeters, a portable survey instrument, or RPT coverage.

This is a Severity Level IV violation (Supplement IV) (applicable to Units 1 and 2).

ENCLOSURE 1

REPLY TO NOTICE OF VIOLATIONS 50-528/92-26-01, 50-529/92-26-02, AND 50-529/92-26-03

NRC INSPECTION CONDUCTED JULY 20 - 24, 1992

INSPECTION REPORT NOS. 50-528,529 AND 530/92-26

REPLY TO NOTICE OF VIOLATION (A) 50-529/92-26-02

Reason For The Violation

The reason for the violation was personnel error when a Radiation Protection Technician (RPT) failed to properly post a High Radiation Area (HRA).

An RPT had been assigned to monitor and survey the placement of pallets holding drums of radioactive waste being moved into the radioactive storage/staging area near the refueling water tank. The RPT had surveyed each of the drums prior to placement on the pallets, and each of the pallets prior to their placement in the storage/staging area. Individually, the pallets did not create a HRA. However, the RPT neglected to perform an adequate survey of the pallets after placement in the storage/staging area, and therefore did not identify, or post as such, the HRA that was created by the cumulative effect of the radiation from two pallets in close proximity.

Corrective Steps That Have Been Taken And The Results Achieved

The area around the drums was surveyed and posted as a high radiation area, in accordance with 10 CFR 20.203(c). Walkdowns of the Unit 2 Radiological Controlled Area were conducted to ensure there were no similar situations. The RP Managers of PVNGS Units 1 and 3 were notified of this situation, as well as all Unit RP Supervisors. The RPT involved was disciplined under the APS Positive Discipline Program.

In addition, RP management issued a directive to RP Supervisors and Technicians in each unit requiring that radwaste containers stored in radwaste storage/staging areas in the radwaste yard reading greater than or equal to 100 mr/hr on contact be located in posted HRA's. This directive, which is more conservative than the requirements of plant RP procedures, will eliminate any potential confusion regarding accessible areas in the

radwaste yard that may have existed in the past. Current plans are for this directive to remain in effect until PVNGS implements the revised 10 CFR Part 20, when the posting of HRA's will be more clearly defined.

Corrective Steps That Will Be Taken To Avoid Further Violations

Contract RPT's reporting on site for the upcoming Unit 3 refueling outage will be provided with lessons learned from this event, to be completed by September 28, 1992.

The General Manager, Site RP, will meet with each of the units' RP Supervisors and Technicians to reinforce management's expectations concerning surveys, posting and control of HRA's, radioactive material control, and radworker communications. This will be completed by October 21, 1992.

Lessons learned from this incident will be presented to site RP technicians in the fourth quarter Industry Events training, scheduled to be completed by January 8, 1993.

Date When Full Compliance Will Be Achieved

Full compliance was achieved on July 22, 1992, when the area around the drums was posted as a high radiation area in accordance with 10 CFR 20.203(c).

REPLY TO NOTICE OF VIOLATION (B) 50-529/92-26-03

Reason For The Violation

The reason for the violation was personnel error when a Radiation Protection Technician (RPT) failed to properly survey a High Radiation Area (HRA).

An RPT had been assigned to monitor and survey the placement of pallets holding drums of radioactive waste being moved into the radioactive storage/staging area near the refueling water tank. The RPT had surveyed each of pallets prior to their placement in the storage/staging area, and individually the pallets did not create a HRA. However, the RPT neglected to perform an adequate documented survey of the pallets after placement in the storage/staging area, and therefore did not identify the HRA that was created by the cumulative effect of the radiation from two pallets in close proximity. Since the RPT incorrectly believed that the posted conditions in the storage/staging area did not change due to the movement of the pallets, he did not document a survey. Current PVNGS procedures do not require a survey to be documented if the posted conditions in an area have not changed.

Corrective Steps That Have Been Taken And The Results Achieved

The area around the drums was surveyed in accordance with 10 CFR 20.201(b), and recorded on a survey map that is maintained in accordance with 10 CFR 20.401(b). Walkdowns of the Unit 2 Radiological Controlled Area were conducted to ensure there were no similar situations. The RP Managers of PVNGS Units 1 and 3 were notified of this situation, as well as all Unit RP Supervisors. The RP technician involved was disciplined under the APS Positive Discipline Program.

In addition, RP management issued a directive to RP Supervisors and Technicians in each unit requiring that a formal documented survey be performed following the movement of radioactive waste barrels into a storage area.

Corrective Steps That Will Be Taken To Avoid Further Violations

Contract RPT's reporting on site for the upcoming Unit 3 refueling outage will be provided with lessons learned from this event, to be completed by September 28, 1992.

The General Manager, Site RP, will meet with each of the Units' RP Supervisors and Technicians to reinforce management's expectations concerning surveys, posting and control of HRA's, radioactive material control, and radworker communications. This will be completed by October 21, 1992.

RP procedures will be reviewed to identify potential improvements to the survey documentation requirements, and the procedures will be revised to incorporate identified improvements. The procedure review will be completed by October 15, 1992, and the procedures revised by October 30, 1992.

Lessons learned from this incident will be presented to site RPT's in the fourth quarter Industry Events training, scheduled to be completed by January 8, 1993.

Date When Full Compliance Will Be Achieved

Full compliance was achieved on July 22, 1992, when the area around the drums was surveyed in accordance with 10 CFR 20.201(b), and recorded on a survey map that is maintained in accordance with 10 CFR 20.401(b).

REPLY TO NOTICE OF VIOLATION (C) 50-528/92-26-01

Reason For The Violation

The primary reason for each of the three incidents cited in the violation was personnel error.

In the incident occurring on December 11, 1991, two contract workers did not pay attention to detail when they disregarded postings and improperly entered a posted high radiation area (HRA).

In the incident occurring on February 4, 1992, an APS worker did not pay attention to detail and improperly entered a posted HRA.

In the incident occurring on March 19, 1992, four contract workers apparently misunderstood instructions by a Radiation Protection Technician, and through inattention to detail, improperly entered a posted HRA.

In addition to these three examples cited in the NOV, another incident occurred on August 29, 1992. In this incident, two APS workers improperly entered a posted HRA in Unit 1. This incident has been investigated under the PVNGS incident investigation program. The primary cause of this incident is also personnel error, where the workers failed to pay attention to detail.

As a result of a thorough review of the circumstances surrounding each of these incidents, PVNGS management has identified a weakness in that some site personnel may not fully comprehend the importance of and potential consequences of entering HRA's without proper authorization and controls.

Corrective Steps That Have Been Taken And The Results Achieved

In each case of unauthorized entry into HRA's, the individuals involved have received appropriate disciplinary action.

In the December 11, 1991 incident, the two contract workers were released back to their contract company, with the commitment that they would complete Radiological Work Practices training prior to returning to work at PVNGS. In addition, the contract company reviewed this incident with their other personnel on site.

In the February 4, 1992 incident, the individual involved was disciplined under the APS Positive Discipline Program.

In the March 19, 1992 incident, the four contract workers involved were disciplined by their contract company.

In the August 29, 1992 incident, the two workers were interviewed and restricted from all work in the Radiological Controlled Area (RCA) pending results of an incident investigation. The workers were disciplined under the APS Positive Discipline Program, and will be required to successfully complete initial Radiological Work Practices training prior to being allowed to work in the RCA.

In addition to the actions taken with the individuals involved in each of these incidents, the following corrective actions were taken site-wide as initial steps to address this problem:

1. On September 1, 1992, a one-hour site stand-down was ordered by the General Manager, Site RP, with concurrence of the Vice President, Nuclear Production. Work was suspended in the RCA. Managers were directed to take this time to ensure that their personnel were made aware of the unauthorized entries into HRA's, and to review

the requirements for work in the RCA and entry into HRA's. It was also emphasized that significant discipline will be taken for any infractions. Following the stand-down, RP personnel at the RCA entry points questioned workers before allowing entry to the RCA, to ensure they understood the requirements for entry into HRA's.

2. The Vice President, Nuclear Production, issued a memo for dissemination to all site personnel that presented the Company's expectations regarding adherence to RP requirements and repercussions for failing to meet the expectations.

3. The Executive Vice President, Nuclear, issued a communication to PVNGS management and supervisory personnel emphasizing their responsibility and accountability for their employees' compliance with radiation protection requirements.

4. Radiological Work Practices Retraining was revised on September 1, 1992, to include added emphasis to the requirements for entry into posted HRA's.

Corrective Steps That Will Be Taken To Avoid Further Violations

The following corrective steps will be taken within the RP Department:

1. Contract RPT's reporting on site for the upcoming Unit 3 refueling outage will be provided with lessons learned from these incidents, to be completed by September 28, 1992.

2. The General Manager, Site RP, will meet with each of the Units' RP Supervisors and Technicians to reinforce management's expectations concerning surveys, posting and control of HRA's, radioactive material control, and radworker communications. This will be completed by October 21, 1992.

3. RP personnel will evaluate the techniques currently utilized to identify HRA's in order to determine if the barriers can be enhanced from a human factors perspective. This will be completed by October 30, 1992.

4. Lessons learned from these incidents will be presented to site RP technicians in the fourth quarter Industry Events training, scheduled to be completed by January 8, 1993.

As an interim measure, beginning no later than September 25, 1992, prejob briefings will be conducted between the Work Group Supervisors or RP personnel and employees for each job requiring a HRA/Locked HRA entry, including routine entries. At this prejob briefing, the Work Group Supervisor or RP personnel will ensure that each employee understands the requirements for the HRA/LHRA entry and the ALARA requirements for the job. Prior to allowing RCA entry under a HRA Radiation Exposure Permit, RP personnel will question workers to ensure that this briefing has occurred and is adequate. While this is in effect, RP will evaluate the effectiveness of this measure to improve worker knowledge and sensitivity. After November 30, 1992, RP will modify or terminate this initiative as necessary with concurrence of Plant Managers.

Additionally, a survey of randomly selected radworkers from each of the three PVNGS units will be conducted to assess their retention of radiological work practices training. Results of the survey will be utilized to enhance the radworker training program as necessary to address any identified knowledge weaknesses. The survey will be completed by October 9, 1992, and the training program will be enhanced as necessary by October 31, 1992.

Date When Full Compliance Will Be Achieved

Full compliance was achieved in the December 11, 1991 incident on December 11, 1991, when the workers exited the posted HRA.

Full compliance was achieved in the February 4, 1992 incident on February 4, 1992, when the worker exited the posted HRA.

Full compliance was achieved in the March 19, 1992 incident on March 19, 1992, when the workers exited the posted HRA.

Full compliance was achieved in the August 29, 1992 incident on August 29, 1992, when the worker exited the posted HRA.