

Arizona Public Service Company

P.O. BOX 53999 • PHOENIX, ARIZONA 85072-3999

RECEIVED
NRC
REGION V

1990 OCT -1 AM 10:53

WILLIAM F. CONWAY
EXECUTIVE VICE PRESIDENT
NUCLEAR

102-01829-WFC/TRB/JJN
September 24, 1990

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

Reference: Letter from S. A. Richards, Chief, Reactor Projects Branch, NRC to
W. F. Conway, Executive Vice President Nuclear, Arizona Public
Service, dated August 23, 1990

Dear Sirs:

Subject: Palo Verde Nuclear Generating Station (PVNGS)
Unit 1, 2, and 3
Docket No. STN 50-528 (License No. NPF-41)
Docket No. STN 50-529 (License No. NPF-51)
Docket No. STN 50-530 (License No. NPF-74)
Reply to Notice of Violations 50-528/90-23-01 and 50-528/90-23-03
File: 90-070-026

This letter is provided in response to the inspection conducted by Messrs,
D. Coe, J. Ringwald, J. Sloan, and P. Narbut from May 27 through July 14,
1990. Based upon the results of the inspection, two apparent violations of
NRC requirements were identified. The violations are discussed in Appendix A
of the referenced letter. A restatement of the violations and PVNGS's
response are provided in Appendix A and Attachment 1, respectively, to this
letter.

In the referenced letter and subject Inspection Report, several instances were
noted in which Operations personnel performance contributed to component
operability problems; or highlighted areas in which Control Room practices
needed improvement. APS recognized these concerns and appreciated the frank
and timely discussions that took place with the NRC during this time.
Although individually these events had minimal significance, APS recognized
that collectively these events could have indicated that performance was not
meeting management's expectations. A summary of these events and lessons
learned was distributed to Unit operations personnel with a briefing from the
shift or plant management.

As part of planned management involvement in the Unit 1 Restart Program, APS
placed experienced management personnel on shift on June 23, 1990, prior to
criticality. Managers remained on shift until the Unit reached 100 percent

~~STANDARD~~
1088



power. Management personnel who participated in this observation program represented all three units. Each assigned individual observed operations crew performance. This role was specifically chosen to strengthen and support the Shift Supervisor role during the plant startup period following a lengthy outage and allowed full-time management observation of crew performance. Although there were minor deviations which were corrected, the observation results indicated that the vast majority of activities were conducted properly, crew briefings prior to testing or critical activities were well run and of high quality. The plant startup was performed in a professional and conservative manner. These overall conclusions were verified by the Plant Manager and other members of senior management during observation of the reactor startup and synchronization to the grid.

Should you have any questions regarding this response, please contact me.

Very truly yours,



WFC/TRB/JJN/dmn

Attachments

cc: J. B. Martin
D. H. Coe
A. H. Gutterman
A. C. Gehr

APPENDIX A

NOTICE OF VIOLATION

Arizona Nuclear Power Project
Palo Verde Unit 1

Docket Number 50-528
License Number NPF-41

During an NRC inspection conducted on May 27 through July 14, 1990, two violations of NRC requirements were identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," 10 CFR Part 2, Appendix C (1990), the violations are listed below:

- A. Unit 1 Technical Specifications, Section 6.11.1, requires procedures for personnel radiation protection to be prepared consistent with the requirements of 10CFR Part 20 and to be approved, maintained and adhered to for all operations involving personnel radiation exposure.

Licensee Procedure 75AC-9RP01, Radiation Exposure and Access Control, provides requirements for radiation workers entering radiation areas.

Step 3.5.2 of Procedure 75AC-9RP01 requires that "All personnel who enter the Radiological Controlled Area must read the REP [Radiation Exposure Permit] and sign-in on the appropriate REP sign-in sheet. By signing in they indicate that they have read and understand the REP requirements and will comply."

Step 3.5.4 of Procedure 75AC-9RP01 requires radiation workers to "Discuss with Radiation Protection the job scope to ... ensure that the appropriate radiological controls are exercised."

REP 1-90-4001D, among other radiation protection measures, requires personnel entering High Radiation Areas to wear an alarming dosimeter.

Contrary to the above; on June 20, 1990, in Unit 1, a Mechanical Maintenance Foreman failed to comply with REP 1-90-4001D, which he had signed, when the Foreman entered a posted High Radiation Area without an alarming dosimeter. Also, contrary to the above, on June 20, 1990, when the Mechanical Maintenance Foreman discussed his entry with the Radiological Protection Shift Technician, the Mechanical Maintenance Foreman and the Radiological Protection Shift Technician had not discussed the fact that the area the Foreman was planning to work in was posted as a High Radiation area and the necessary radiological controls for that area.

This is a Severity Level IV violation applicable to Unit 1 (Supplement I).



- B. Unit 1 Technical Specifications, Section 6.8.1, states in part: "Written Procedures shall be established, implemented, and maintained covering the activities ... recommended in Appendix A of Regulatory Guide 1.33, Revision 2, February, 1978.

Regulatory Guide 1.33, Revision 2, states in part: "Procedures for Startup, Operating and Shutdown of Safety-Related PWR Systems - Instructions for ... changing modes of operation should be prepared for the ... Main Steam System."

These procedures are implemented, in part, by licensee Procedure 41DP-10P01, Manual Operation of Air Operated Valves, which states, in Appendix B, Step B.8, for SGB-HV-178: "Slide the clevis onto the actuator shaft. Ensure clevis is securely engaged ... Tighten set screw to properly secure."

Contrary to the above, on June 21, 1990, licensee personnel failed to follow Procedure 41DP-10P01, Appendix B, Step B.8, in that in Unit 1, an Auxiliary Operator engaged the clevis on Atmospheric Dump Valve SGB-HV-178, but failed to tighten the set screw.

This is a Severity Level V Violation applicable to Unit 1 (Supplement I).

ATTACHMENT 1

REPLY TO NOTICE OF VIOLATION 50-528/90-23-01

I. REASON FOR THE VIOLATION

The reason for the violation was a personnel error on the part of a Unit 1 Radiation Protection Technician (RPT) and a maintenance mechanic. During a briefing, the maintenance mechanic and the RPT discussed the proposed activities in the lower level of "A" LPSI pump room, the radiological survey, and radiological protective actions for the contaminated areas, prior to the maintenance mechanic entering the area. At this time, the RPT should have recognized the fact that the lower level of the "A" LPSI pump room was a High Radiation Area (HRA) and assigned the appropriate radiological control (i.e., alarming dosimeter, dose rate meter, or continuous RP coverage) in accordance with APS procedures and the Radiation Exposure Permit. However, while reviewing radiological survey maps neither individual recognized that the proposed activities would occur in a High Radiation Area (lower level of the "A" LPSI pump room).

Contributing to the violation was the physical location of the posting to the HRA (lower level of the "A" LPSI pump room). The posting was hung on the upper level of the "A" LPSI pump room between the railings that surrounded the grating penetration and ladder to the lower level.

The posting was hung away from the safety bar which is in front of the access to the ladder to avoid inhibiting egress from the area and the additional hazard of requiring a manipulation of the rope while climbing on a ladder. The mechanic entered the lower level of the "A" LPSI pump room by backing down a ladder and did not see the HRA posting.

II. CORRECTIVE STEPS THAT HAVE BEEN TAKEN AND THE RESULTS ACHIEVED

The maintenance mechanic reported the incident to RP, the Mechanical Maintenance Supervisor and the Plant Manager. The maintenance mechanic was temporarily prohibited from entering Radiologically Controlled Areas (RCAs) pending an investigation of this event and evaluation of his exposure. The mechanic's exposure was evaluated and no excessive exposure occurred.

An investigation of this event was conducted. A Radiological Control Problem Report documented the results of the investigation and the lessons learned. This report was forwarded to Units 2 and 3 Radiation Protection personnel for their review. The Unit 1 Radiological Protection Manager (RPM) personally reviewed this event with the onshift crews shortly after the event. The balance of the Unit 1 RP staff was briefed by their supervision.



The RPT was relieved of duties at the control point for the RCA pending a review with the Unit 1 RPM. The RPT voluntarily resigned (which APS believes was due to unrelated reasons). Therefore, no further corrective action was required.

The maintenance mechanic briefed Unit 1 mechanical maintenance personnel on the lessons learned from this event.

The lower level of the "A" LPSI pump room area was reposted to reduce the area controlled as a HRA. This eliminated the difficulty of posting the ladder access.

III. CORRECTIVE STEPS THAT WILL BE TAKEN TO AVOID VIOLATIONS

As noted in the inspection report, APS was revising the posting program at the time of this event to reduce the areas designated as HRA by eliminating overly conservative postings. Additionally, the posting procedure will be revised to include a requirement that the posting for HRA obstruct an individual accessing the area. This requirement to obstruct access is intended to mean that a rope, sign, or other physical object will confront, alter, or hinder an individual's reasonable access to that area. These revisions are expected to be completed by October 5, 1990. In addition, the Site Radiation Protection General Manager will issue a memorandum by September 28, 1990, to RP personnel

stressing the importance that the High Radiation Area postings may also be functioning as a barricade.

IV. DATE WHEN FULL COMPLIANCE WAS ACHIEVED

Full compliance was achieved on June 20, 1990, when the maintenance mechanic exited the HRA.

REPLY TO NOTICE OF VIOLATION 50-528/90-23-03

I. REASON FOR THE VIOLATION

The reason for the violation was a personnel error by an operator manually operating the valve. The operator omitted an action contained in a step of the procedure to tighten the set screw on the clevis pin.

II. CORRECTIVE STEPS THAT HAVE BEEN TAKEN AND THE RESULTS ACHIEVED

A Human Performance Evaluation (HPES) was conducted for this event. The effectiveness of the job performance measure (JPM) for the manual operation of the Atmospheric Dump Valve (ADV) was evaluated by unannounced testing of recently qualified operators from Units 1, 2 and 3. These operators correctly operated the ADV, therefore, APS has concluded that the training is adequate. An evaluation of the procedure for the manual operation of the ADV was conducted which identified that the requirement to tighten the set screw on the clevis is contained in a step that requires another action. The procedure has since been revised to include a separate step for the tightening of the set screw to decrease the possibility of missing the step.

The Human Performance Evaluation report was reviewed with operating crews in Unit 1. Units 2 and 3 conducted briefings with their



NRC Document Control Desk
Attachment 1, Page 6 of 6

102-01829-WFC/TRB/JJN
September 24, 1990

personnel. The Unit 1 operator was counselled on the necessity for attention to detail and satisfactorily re-performed the JPM.

III. CORRECTIVE STEPS THAT WILL BE TAKEN TO AVOID VIOLATIONS

APS believes the actions taken as described above are adequate to prevent recurrence.

IV. DATE WHEN FULL COMPLIANCE WAS ACHIEVED

Full compliance was achieved on June 21, 1990, when the Atmospheric Dump Valve was restored its normal condition.



ACCELERATED DISTRIBUTION DEMONSTRATION SYSTEM

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR: 9010090017 DOC. DATE: 90/09/24 NOTARIZED: NO DOCKET #
 FACIL: STN-50-528 Palo Verde Nuclear Station, Unit 1, Arizona Publi 05000528
 STN-50-529 Palo Verde Nuclear Station, Unit 2, Arizona Publi 05000529
 STN-50-530 Palo Verde Nuclear Station, Unit 3, Arizona Publi 05000530
 AUTH. NAME AUTHOR AFFILIATION
 CONWAY, W.F. Arizona Public Service Co. (formerly Arizona Nuclear Power
 RECIP. NAME RECIPIENT AFFILIATION
 Document Control Branch (Document Control Desk)

SUBJECT: Responds to NRC 900823 ltr re violations noted in Insp Repts
 50-528/90-23, 50-529/90-23 & 50-530/90-23.

DISTRIBUTION CODE: IE01D COPIES RECEIVED: LTR 1 ENCL 1 SIZE: 10
 TITLE: General (50 Dkt)-Insp Rept/Notice of Violation Response

NOTES: STANDARDIZED PLANT 05000528
 Standardized plant. 05000529
 Standardized plant. 05000530

		RECIPIENT ID CODE/NAME	COPIES LTR ENCL		RECIPIENT ID CODE/NAME	COPIES LTR ENCL
		PD5 PD	1 1		PETERSON, S.	1 1
		TRAMMELL, C.	1 1			
INTERNAL:		ACRS	2 2		AEOD	1 1
		AEOD/DEIIB	1 1		AEOD/TPAD	1 1
		DEDRO	1 1		NRR MORISSEAU, D	1 1
		NRR SHANKMAN, S	1 1		NRR/DLPQ/LPEB10	1 1
		NRR/DOEA DIR 11	1 1		NRR/DREP/PEPB9D	1 1
		NRR/DRIS/DIR	1 1		NRR/DST/DIR 8E2	1 1
		NRR/PMAS/ILRB12	1 1		NUDOCS-ABSTRACT	1 1
		OE DIR	1 1		OGC/HDS1	1 1
		<u>REG FILE</u> 02	1 1		RGN5 FILE 01	1 1
EXTERNAL:		NRC PDR	1 1		NSIC	1 1
NOTES:			1 1			

NOTE TO ALL "RIDS" RECIPIENTS:

PLEASE HELP US TO REDUCE WASTE! CONTACT THE DOCUMENT CONTROL DESK,
 ROOM P1-37 (EXT. 20079) TO ELIMINATE YOUR NAME FROM DISTRIBUTION
 LISTS FOR DOCUMENTS YOU DON'T NEED!

TOTAL NUMBER OF COPIES REQUIRED: LTR 25 ENCL 25



Arizona Public Service Company

P.O. BOX 53999 • PHOENIX, ARIZONA 85072-3999

WILLIAM F. CONWAY
EXECUTIVE VICE PRESIDENT
NUCLEAR

102-01829-WFC/TRB/JJN
September 24, 1990

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

Reference: Letter from S. A. Richards, Chief, Reactor Projects Branch, NRC to
W. F. Conway, Executive Vice President Nuclear, Arizona Public
Service, dated August 23, 1990

Dear Sirs:

Subject: Palo Verde Nuclear Generating Station (PVNGS)
Unit 1, 2, and 3
Docket No. STN 50-528 (License No. NPF-41)
Docket No. STN 50-529 (License No. NPF-51)
Docket No. STN 50-530 (License No. NPF-74)
Reply to Notice of Violations 50-528/90-23-01 and 50-528/90-23-03
File: 90-070-026

This letter is provided in response to the inspection conducted by Messrs, D. Coe, J. Ringwald, J. Sloan, and P. Narbut from May 27 through July 14, 1990. Based upon the results of the inspection, two apparent violations of NRC requirements were identified. The violations are discussed in Appendix A of the referenced letter. A restatement of the violations and PVNGS's response are provided in Appendix A and Attachment 1, respectively, to this letter.

In the referenced letter and subject Inspection Report, several instances were noted in which Operations personnel performance contributed to component operability problems, or highlighted areas in which Control Room practices needed improvement. APS recognized these concerns and appreciated the frank and timely discussions that took place with the NRC during this time. Although individually these events had minimal significance, APS recognized that collectively these events could have indicated that performance was not meeting management's expectations. A summary of these events and lessons learned was distributed to Unit operations personnel with a briefing from the shift or plant management.

As part of planned management involvement in the Unit 1 Restart Program, APS placed experienced management personnel on shift on June 23, 1990, prior to criticality. Managers remained on shift until the Unit reached 100 percent

00017
9010090017 900924
PDR ADOCK 05000528
Q PNU

TE01
111

power. Management personnel who participated in this observation program represented all three units. Each assigned individual observed operations crew performance. This role was specifically chosen to strengthen and support the Shift Supervisor role during the plant startup period following a lengthy outage and allowed full-time management observation of crew performance. Although there were minor deviations which were corrected, the observation results indicated that the vast majority of activities were conducted properly, crew briefings prior to testing or critical activities were well run and of high quality. The plant startup was performed in a professional and conservative manner. These overall conclusions were verified by the Plant Manager and other members of senior management during observation of the reactor startup and synchronization to the grid.

Should you have any questions regarding this response, please contact me.

Very truly yours,



WFC/TRB/JJN/dmn

Attachments

cc: J. B. Martin
D. H. Coe
A. H. Gutterman
A. C. Gehr



APPENDIX A

NOTICE OF VIOLATION

Arizona Nuclear Power Project
Palo Verde Unit 1

Docket Number 50-528
License Number NPF-41

During an NRC inspection conducted on May 27 through July 14, 1990, two violations of NRC requirements were identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," 10 CFR Part 2, Appendix C (1990), the violations are listed below:

- A. Unit 1 Technical Specifications, Section 6.11.1, requires procedures for personnel radiation protection to be prepared consistent with the requirements of 10CFR Part 20 and to be approved, maintained and adhered to for all operations involving personnel radiation exposure.

Licensee Procedure 75AC-9RP01, Radiation Exposure and Access Control, provides requirements for radiation workers entering radiation areas.

Step 3.5.2 of Procedure 75AC-9RP01 requires that "All personnel who enter the Radiological Controlled Area must read the REP [Radiation Exposure Permit] and sign-in on the appropriate REP sign-in sheet. By signing in they indicate that they have read and understand the REP requirements and will comply."

Step 3.5.4 of Procedure 75AC-9RP01 requires radiation workers to "Discuss with Radiation Protection the job scope to ... ensure that the appropriate radiological controls are exercised."

REP 1-90-4001D, among other radiation protection measures, requires personnel entering High Radiation Areas to wear an alarming dosimeter.

Contrary to the above, on June 20, 1990, in Unit 1, a Mechanical Maintenance Foreman failed to comply with REP 1-90-4001D, which he had signed, when the Foreman entered a posted High Radiation Area without an alarming dosimeter. Also, contrary to the above, on June 20, 1990, when the Mechanical Maintenance Foreman discussed his entry with the Radiological Protection Shift Technician, the Mechanical Maintenance Foreman and the Radiological Protection Shift Technician had not discussed the fact that the area the Foreman was planning to work in was posted as a High Radiation area and the necessary radiological controls for that area.

This is a Severity Level IV violation applicable to Unit 1 (Supplement I).

- B. Unit 1 Technical Specifications, Section 6.8.1, states in part: "Written Procedures shall be established, implemented, and maintained covering the activities ... recommended in Appendix A of Regulatory Guide 1.33, Revision 2, February, 1978.

Regulatory Guide 1.33, Revision 2, states in part: "Procedures for Startup, Operating and Shutdown of Safety-Related PWR Systems - Instructions for ... changing modes of operation should be prepared for the ... Main Steam System."

These procedures are implemented, in part, by licensee Procedure 41DP-10P01, Manual Operation of Air Operated Valves, which states, in Appendix B, Step B.8, for SGB-HV-178: "Slide the clevis onto the actuator shaft. Ensure clevis is securely engaged ... Tighten set screw to properly secure."

Contrary to the above, on June 21, 1990, licensee personnel failed to follow Procedure 41DP-10P01, Appendix B, Step B.8, in that in Unit 1, an Auxiliary Operator engaged the clevis on Atmospheric Dump Valve SGB-HV-178, but failed to tighten the set screw.

This is a Severity Level V Violation applicable to Unit 1 (Supplement I).

ATTACHMENT 1

REPLY TO NOTICE OF VIOLATION 50-528/90-23-01

I. REASON FOR THE VIOLATION

The reason for the violation was a personnel error on the part of a Unit 1 Radiation Protection Technician (RPT) and a maintenance mechanic. During a briefing, the maintenance mechanic and the RPT discussed the proposed activities in the lower level of "A" LPSI pump room, the radiological survey, and radiological protective actions for the contaminated areas, prior to the maintenance mechanic entering the area. At this time, the RPT should have recognized the fact that the lower level of the "A" LPSI pump room was a High Radiation Area (HRA) and assigned the appropriate radiological control (i.e., alarming dosimeter, dose rate meter, or continuous RP coverage) in accordance with APS procedures and the Radiation Exposure Permit. However, while reviewing radiological survey maps neither individual recognized that the proposed activities would occur in a High Radiation Area (lower level of the "A" LPSI pump room).

Contributing to the violation was the physical location of the posting to the HRA (lower level of the "A" LPSI pump room). The posting was hung on the upper level of the "A" LPSI pump room between the railings that surrounded the grating penetration and ladder to the lower level.



The posting was hung away from the safety bar which is in front of the access to the ladder to avoid inhibiting egress from the area and the additional hazard of requiring a manipulation of the rope while climbing on a ladder. The mechanic entered the lower level of the "A" LPSI pump room by backing down a ladder and did not see the HRA posting.

II. CORRECTIVE STEPS THAT HAVE BEEN TAKEN AND THE RESULTS ACHIEVED

The maintenance mechanic reported the incident to RP, the Mechanical Maintenance Supervisor and the Plant Manager. The maintenance mechanic was temporarily prohibited from entering Radiologically Controlled Areas (RCAs) pending an investigation of this event and evaluation of his exposure. The mechanic's exposure was evaluated and no excessive exposure occurred.

An investigation of this event was conducted. A Radiological Control Problem Report documented the results of the investigation and the lessons learned. This report was forwarded to Units 2 and 3 Radiation Protection personnel for their review. The Unit 1 Radiological Protection Manager (RPM) personally reviewed this event with the onshift crews shortly after the event. The balance of the Unit 1 RP staff was briefed by their supervision.



The RPT was relieved of duties at the control point for the RCA pending a review with the Unit 1 RPM. The RPT voluntarily resigned (which APS believes was due to unrelated reasons). Therefore, no further corrective action was required.

The maintenance mechanic briefed Unit 1 mechanical maintenance personnel on the lessons learned from this event.

The lower level of the "A" LPSI pump room area was reposted to reduce the area controlled as a HRA. This eliminated the difficulty of posting the ladder access.

III. CORRECTIVE STEPS THAT WILL BE TAKEN TO AVOID VIOLATIONS

As noted in the inspection report, APS was revising the posting program at the time of this event to reduce the areas designated as HRA by eliminating overly conservative postings. Additionally, the posting procedure will be revised to include a requirement that the posting for HRA obstruct an individual accessing the area. This requirement to obstruct access is intended to mean that a rope, sign, or other physical object will confront, alter, or hinder an individual's reasonable access to that area. These revisions are expected to be completed by October 5, 1990. In addition, the Site Radiation Protection General Manager will issue a memorandum by September 28, 1990, to RP personnel

stressing the importance that the High Radiation Area postings may also be functioning as a barricade.

IV. DATE WHEN FULL COMPLIANCE WAS ACHIEVED

Full compliance was achieved on June 20, 1990, when the maintenance mechanic exited the HRA.

REPLY TO NOTICE OF VIOLATION 50-528/90-23-03

I. REASON FOR THE VIOLATION

The reason for the violation was a personnel error by an operator manually operating the valve. The operator omitted an action contained in a step of the procedure to tighten the set screw on the clevis pin.

II. CORRECTIVE STEPS THAT HAVE BEEN TAKEN AND THE RESULTS ACHIEVED

A Human Performance Evaluation (HPES) was conducted for this event. The effectiveness of the job performance measure (JPM) for the manual operation of the Atmospheric Dump Valve (ADV) was evaluated by unannounced testing of recently qualified operators from Units 1, 2 and 3. These operators correctly operated the ADV, therefore, APS has concluded that the training is adequate. An evaluation of the procedure for the manual operation of the ADV was conducted which identified that the requirement to tighten the set screw on the clevis is contained in a step that requires another action. The procedure has since been revised to include a separate step for the tightening of the set screw to decrease the possibility of missing the step.

The Human Performance Evaluation report was reviewed with operating crews in Unit 1. Units 2 and 3 conducted briefings with their

personnel. The Unit 1 operator was counselled on the necessity for attention to detail and satisfactorily re-performed the JPM.

III. CORRECTIVE STEPS THAT WILL BE TAKEN TO AVOID VIOLATIONS

APS believes the actions taken as described above are adequate to prevent recurrence.

IV. DATE WHEN FULL COMPLIANCE WAS ACHIEVED

Full compliance was achieved on June 21, 1990, when the Atmospheric Dump Valve was restored its normal condition.