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AUTH.NAME AUTHOR AFFILIATION
PARRISH,J.V. Washington Public Power Supply System
RECIP.NAME RECIPIENT AFFILIATION
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SUBJECT: Responds to NRC 930427 ltr re violations noted in insp rept 50-397/93-201.C/As:root cause analysis performed by licensee to address addl problems identified pertaining to inadequate C/As & procedural adherence.

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May 27, 1993
G02-93-126

Docket No. 50-397

U. S. Nuclear Regulatory Commission
Attn: Document Control Desk
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Washington, D. C. 20555

Gentlemen:

Subject: **WNP-2, OPERATING LICENSE NO. NPF-21**
NRC INSPECTION REPORT 93-201
RESPONSE TO NOTICE OF VIOLATIONS

The Washington Public Power Supply System hereby replies to the Notice of Violations contained in your letter dated April 27, 1993. Our reply, pursuant to the provisions of Section 2.201, Title 10, Code of Federal Regulations, consists of this letter and Appendix A (attached).

In Appendix A, the violations are addressed with an explanation of our position regarding validity, corrective action and date of full compliance.

Sincerely,

J. V. Parrish (Mail Drop 1023)
Assistant Managing Director, Operations

JDA/bk

Attachments

cc: JB Martin - NRC RV
NS Reynolds - Winston & Strawn
JW Clifford - NRR
DL Williams - BPA/399
NRC Site Inspector - 901A

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Appendix A

During an NRC inspection conducted on February 1 through 11, 1993, 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, the violations are listed below:

A. 10 CFR 50, Appendix B, Criterion XVI, states, in part: "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:

1) As of February 11, 1993, the cause of valve hammering, a significant condition adverse to quality, identified in May, 1991, on service water loop isolation valves SW-V-12A and SW-V-12B, had not been determined nor had corrective action been taken to preclude recurrence.

2) As of February 11, 1993, corrective action for a deviation from plant chemistry requirements, a condition adverse to quality identified in September 1992, had not been taken. In particular, the service water system sulfur concentration exceeded control limits established in Administrative Procedure 1.13.1, "Chemical Process Management and Control," Revision 11. The sulfur limit of 150 ppm was exceeded in September 1992, reached values as high as 183 ppm, and had not been brought back into specification at the conclusion of the inspection on February 11, 1993.

This is a severity level IV violation (Supplement I).

Validity of Violation

The Supply System acknowledges the validity of this violation. The reasons for the violation are: 1) management methods did not assure timely response to known problems with Standby Service Water (SSW) System valves SW-V-12A and SW-V-12B, and 2) existing procedures/policy did not adequately define actions required when the sulfur concentrations in the SSW System exceeded the control limits.

In 1991, Supply System personnel determined that, based on equipment monitoring activities and engineering evaluation, the torque switch "hammering" on SW-V-12A and SW-V-12B was not a significant condition adverse to quality in that the condition was infrequent, was not severe and did not challenge the safety function of the valves. It was concluded from this determination that, in this condition, the valves would remain operable. However, although an evaluation determined the system was operable, the cause determination of this malfunction in a safety-related component was not addressed and additional corrective actions to prevent recurrence were not identified.

With regard to the increased sulfur concentration, there was no guidance in Plant Procedure (PPM) 1.13.1, "Chemical Process Management and Control," as to what actions to take in the event of a control limit being exceeded in the SSW System.

Corrective Steps Taken/Results Achieved

1. On February 10, 1993, a Problem Evaluation Request (PER) was written to document the concerns raised pertaining to SW-V-12A and SW-V-12B. It was concluded that the valves were operable and would perform their specified function. This conclusion was based on: 1) the valves have never failed to open upon demand, 2) static test results showed that developed thrust values are within the design limits of the MOV, 3) additional margin for operation under degraded voltage conditions is available, and 4) the hammering occurs only on the closed cycle and, based upon existing field data, was infrequent and did not excessively load components.

2. In an attempt to determine the cause of the SW-V-12A and SW-V-12B condition, representatives of the valve and actuator manufacturers were contacted. It was concluded that, in view of the locking gear ratio, this condition was most likely due to binding in the disk guides which could stop travel and then allow the disk to fall further into the valve seat when differential pressure was removed. Accordingly, during the ongoing annual maintenance and refueling outage, SW-V-12B was disassembled to determine if either seat or guide damage, or seat-to-guide clearances were contributing to the problem. Although guide wear was observed, a valve vendor representative determined that no disk binding or tilting was evident.

3. On February 5, 1993, a PER was written to document the condition of the sulfur concentration in the SSW System being above the control limit of 150 ppm. The disposition of the PER identified the probable cause as the level of biocide additions in the spray ponds. An engineering evaluation was performed and it was concluded that the sulfur excursion experienced would not result in detrimental effects to the Residual Heat Removal (RHR) System heat exchanger tubing.

4. Followup guidance from Materials Engineering was issued pertaining to SSW System water chemistry control limits, including recommendations on how to address deviations from those limits.

5. Procedure PPM 1.3.58, "Conduct of Chemistry," was issued and provides guidance such that an Abnormal Condition Report (ACR) will be initiated for any chemical limit that is exceeded in a Plant Safety System. Furthermore, the review of the ACR will include a determination of whether an engineering evaluation is required.

6. Senior Management issued a letter on April 26, 1993, outlining those expectations pertaining to the writing of PERs. One of the 34 examples presented in the letter included a discussion of exceeding the sulfur concentration control limit in the SSW System, with the expectation provided that a PER should be written in this particular case.

Corrective Action to be Taken

1. Supply System Engineering has evaluated options for eliminating the hammering on SW-V-12A and SW-V-12B and the continuous close signal will be removed from SW-V-12A and SW-V-12B logic to eliminate the problem.

2. Several corrective action process improvement initiatives are also planned and these are addressed in our SALP Report response dated May 27, 1993.

Date of Full Compliance

Changes to the continuous close signal logic for SW-V-12A and SW-V-12B will be implemented prior to startup from the ongoing annual maintenance and refueling outage (currently scheduled for June 15, 1993).

B. 10 CFR 50, Appendix B, Criterion V states, in part: "Activities affecting quality shall be prescribed by documented instructions, procedures, or drawings of a type appropriate to the circumstances and shall be accomplished in accordance with these instructions, procedures, or drawings."

WNP-2 Plant Procedure, PPM 1.2.3, "Use of Controlled Procedures" Revision 19, states in paragraph 5.1.2 that plant personnel are responsible for operating plant equipment and systems per applicable plant procedures.

WNP-2 Plant Procedure, PPM 2.4.5, "Standby Service Water System" Revision 19, requires valves SW-V-168B and SW-V-169B to be positioned and verified closed and that the personnel performing the positioning and performing the independent position verification initial for their actions on a data sheet.

WNP-2 Plant Procedure, PPM 3.1.1, "Master Startup checklist" Revision 12, Attachment 7.1, requires that the Shift Manager review and resolve situations where valves cannot be positioned as required by the checklist. It additionally requires that checklist discrepancies be addressed by submitting a procedure revision request.

Contrary to the above, quality affecting activities were not accomplished in accordance with procedures in that:

1) On June 17, 1992, an equipment operator erroneously verified, by initialling, that valves SW-V-168B and SW-V-169B were shut. However, the valves were inaccessible under water at the time of the valve line up and could not be verified shut.

2) On June 17, 1992, another equipment operator independently verifying valve position erroneously annotated the valve line up sheet with a note that stated "Valves removed and line is capped." However, the valves were not removed, nor was the line capped at that time.

3) On June 17, 1992, the Shift Manager did not resolve the situation where valves SW-V-168B and SW-V-169B could not be positioned as required by the checklist. Further, the Shift Manager did not submit a procedure revision request for the checklist discrepancy which stated "Valve removed, line capped...."

This is a severity level IV violation (Supplement I).

Validity of Violation

The Supply System acknowledges the validity of this violation pertaining to procedural compliance concerns associated with a valve lineup performed in June 1992. The reason for the violation was work practices less than adequate. The valve positioner failed to verify the proper configuration of the valves or record on the valve checklist that the valves were inaccessible, the individual reviewing the valve lineup "lined out" the valve positioner's initials and annotated on the checklist (incorrectly) that the valves were removed and capped, and the Shift Manager accepted the valve lineup but did not resolve the situation where the valves could not be repositioned as required by the checklist.

Corrective Steps Taken/Results Achieved

1. On February 4, 1993, a Problem Evaluation Request (PER) was written to document the concern with the valve lineup. It was concluded from the PER disposition that SW-V-168B and SW-V-169B are excluded from the system valve lineup when they are submerged. The valves were last positioned (closed) prior to initial fuel load (1983 time-frame) and the valves have been submerged since that time. Furthermore, because SSW pond level has constantly been maintained a minimum of 2 feet above the valve handwheels and the valves cannot be reached from the pond walls, it was also concluded that the valves were closed and the siphon line was operable.

2. As a result of previous violations/concerns pertaining to procedural compliance and since the time-frame when this valve lineup problem occurred, several improvement initiatives have been implemented pertaining to procedural adherence. These initiatives included issuing management expectations and performing departmental procedural self-assessments. However, it should be noted that additional recent examples of continuing problems with procedural adherence have been identified by organizations both internal and external to the Supply System. For example, a Level 1 Quality Finding Report (QFR) was issued to Supply System Senior Management on April 14, 1993, as the result of a recent Quality Assurance Department Audit of the corrective action process. During the audit, several concerns were identified relating to resolution of procedural adherence problems. Accordingly, Supply System Senior Management directed that a Level 1 Root Cause Analysis be performed with the assistance of an outside contractor to evaluate the concerns identified as a result of the audit.

Corrective Action to be Taken

1. A discussion of this violation will be included in Equipment Operator Update Training.

2. A Level 1 Root Cause Analysis is currently being performed to address additional problems identified pertaining to inadequate corrective actions and procedural adherence.

3. Several procedural compliance improvement initiatives are also planned and these are addressed in our SALP Report response dated May 27, 1993.

Date of Full Compliance

1. The Equipment Operator Update Training Course will be modified to include a discussion of the violation by August 1, 1993.

2. The Level 1 Root Cause Analysis will be completed by June 30, 1993.