

CATEGORY 1

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SUBJECT: Forwards response to violations noted in insp rept
 50-397/98-06. Corrective actions: 10CFR5.59 SE performed to
 determine, present closed-in-standby position of RHR min flow
 valves does not represent ureviewed safety question.

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WASHINGTON PUBLIC POWER SUPPLY SYSTEM

P.O. Box 968 • Richland, Washington 99352-0968

June 15, 1998
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Docket No. 50-397

U.S. Nuclear Regulatory Commission
Document Control Desk
Washington, DC 20555

Gentlemen:

Subject: WNP-2, OPERATING LICENSE NPF-21,
NRC INSPECTION REPORT 98-06, RESPONSE
TO NOTICE OF VIOLATION

Reference: Letter dated May 14, 1998, HJ Wong (NRC) to JV Parrish (SS), "NRC
Inspection Report 50-397/98-06 and Notice of Violation"

The Supply System's response to the Violations of the referenced Notice of Violation, pursuant to the provisions of Section 2.201, Title 10, Code of Federal Regulations, is enclosed in the Attachment.

Should you have any questions or desire additional information regarding this matter, please call Mr. PJ Inserra at (509) 377-4147.

Respectfully,

PR Bemis
Vice President, Nuclear Operations
Mail Drop PE23

Attachment

220038

IE01/1

cc: EW Merschhoff - NRC RIV
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NRC INSPECTION REPORT 98-06, RESPONSE TO NOTICE OF VIOLATION

Attachment A

Page 1 of 8

VIOLATION A

Restatement of Violation A

WNP-2 Technical Specification 5.4.1.a requires written procedures to be established, implemented, and maintained for activities covered under Regulatory Guide 1.33, Revision 2, Appendix A, February 1978.

Appendix A of Regulatory Guide 1.33 includes the control of plant equipment as an activity requiring written procedures.

Plant Procedure Manual (PPM) 1.3.1, Revision 36, "WNP-2 Operating Policies, Programs, and Practices," provides, in part, guidelines to operators for controlling plant equipment to ensure operation of the plant within Technical Specification limits. Section 4.1 of PPM 1.3.1 directs that during activities that cause a system or component to become inoperable per Technical Specifications, the shift manager/control room supervisor shall declare the system or component inoperable and enter it into the tracking log.

Contrary to the above, on April 3, 1998, while the plant was operating in Mode 1, the shift manager/control room supervisor approved the start of a maintenance activity that rendered control room air conditioning Subsystem A inoperable, but failed to declare the subsystem inoperable and enter it in the tracking log.

This is a Severity Level IV violation (Supplement I).

Response to Violation A

The Supply System accepts the violation.

Reason for Violation A

The Supply System agrees with the statement of the Violation, and with the description of this event given in the Report Details.

As described in the Report Details, the control room supervisor (CRS) inappropriately assumed that no entry into Technical Specification 3.7.4 was necessary for the maintenance work involving the control room air conditioning (AC) subsystem A. This assumption was based on his review of the equipment clearance and the Voluntary Entry into Tech Spec Action Statement (VET) sheet for a similar work activity involving control room AC subsystem A. Based on his review of the documents associated with the similar work activity, a log entry was made for entry into Licensee Controlled Specification (LCS) 1.7.2 for system restoration within 30 days, but the additional log entry referencing Technical Specification 3.7.4 for system restoration within 30 days was missed.

NRC INSPECTION REPORT 98-06, RESPONSE TO NOTICE OF VIOLATION

Attachment A

Page 2 of 8

Corrective Actions Taken and Results Achieved

The CRS and Shift Manager involved in the incident were counseled on the importance of self-checking and maintaining focus on error free operations.

Corrective Steps That Will Be Taken to Avoid Further Violations

All corrective actions have been completed.

Date of Full Compliance

Full compliance was achieved on April 3, 1998 when an LCO Log entry was made for Technical Specification 3.7.4.

VIOLATION B

Restatement of Violation B

10 CFR 50.59(b)(1) requires licensees to maintain records of changes in the facility and of changes in procedures made pursuant to this section, to the extent that these changes constitute changes in the facility as described in the Final Safety Analysis Report (FSAR) or to the extent that they constitute changes in procedures as described in the FSAR. These records must include a written safety evaluation which provides the bases for the determination that the change does not involve an unreviewed safety question.

10 CFR 50.9(a) requires, in part, that information required by statute or by the Commission's regulations, orders, or license conditions to be maintained by the licensee shall be complete and accurate in all material respects.

WNP-2 Final Safety Analysis Report, Section 5.4.7.1.1, describes the various design modes of operation of the residual heat removal (RHR) system, including Standby. Section 5.4.7.1.1 states that, in the Standby mode, the system is aligned with the pumps suction from the suppression pool, the minimum flow bypass valves open, and all other RHR system valves aligned so that only the inboard injection valves are required to open and the RHR pumps started for flow to be delivered to the reactor vessel following depressurization.

Contrary to the above, as of April 25, 1998, the description of the facility in the FSAR was not complete and accurate in all material respects in that the FSAR did not match the facility and that the required written safety evaluation was not performed. Specifically, since initial facility licensing in April 1984, the FSAR has been inaccurate in that the licensee has maintained the minimum flow bypass valves closed when the RHR system is in Standby and a written safety evaluation was not performed to provide the bases for the determination that this defacto change does not involve an unreviewed safety question. Additionally, the actual RHR system alignment is that the outboard



NRC INSPECTION REPORT 98-06, RESPONSE TO NOTICE OF VIOLATION

Attachment A

Page 3 of 8

injection valves are closed (requiring opening to deliver flow to the reactor vessel) instead of open as described in Section 5.4.7.1.1 of the FSAR.

This is a Severity Level IV violation (Supplement I).

Response to Violation B

The Supply System accepts the violation of the requirements of 10 CFR 50.59.

Reason for Violation B

The original vendor description of the Residual Heat Removal (RHR) system showed the RHR pump minimum flow valves to be open in the system standby configuration. This system description was incorporated into the plant FSAR in the form of system diagrams. However, since initial plant licensing in December 1983, these valves have been maintained in the closed position with the system in standby. No 10 CFR 50.59 evaluation was performed prior to initial plant operation to support this departure in system configuration from the FSAR. In 1984, a plant design modification changed the minimum flow valve operating logic to automatically close the valves when the associated pump is not running to facilitate the closed-in-standby configuration. A 10 CFR 50.59 evaluation was performed in association with this modification but failed to recognize that a discrepancy between the existing FSAR description and actual system standby configuration existed. The modification also failed to correct the FSAR figure showing the standby configuration as open.

In the Report Details the following information appears. "In 1993, the licensee revised [FSAR] Figure 5.4-14c to show that the minimum flow bypass valves are closed in standby. The change was made to reflect the operation of RHR, as described in PPM 2.4.2 [RHR System operating procedure] and to correct what was termed a "drawing discrepancy that has been in place since 1983." Again, no evaluation was performed for the change to the figure."

The RHR system operating procedure has shown the standby position as closed since the first revision. Also, in 1993, the valve was shown to be closed in standby in FSAR Table 6.2-16, and on the functional control diagram and system flow diagrams for the RHR system. Considering the fact that these other sources showed the RHR minimum flow valve to be closed in standby, it was our conclusion that the FSAR Figure 5.4-14c error was administrative in nature and that no safety evaluation was necessary to correct the error. This error existed in 1993 because the 1984 plant modification failed to appropriately update the FSAR. When correcting internal FSAR inconsistencies to match actual plant design and operational configuration, our FSAR change processes do not require the assumption of error in implementation of previously installed plant configuration.

Also, it is stated in the Report Details that, "Neither of the above errors was identified during the two independent reviews established by the licensee's FSAR upgrade program [in 1998]. Although the position of the minimum flow valves was questioned during an additional review of Section 5.4.7 that was performed concurrently with the inspectors, the licensee concluded that the

NRC INSPECTION REPORT 98-06, RESPONSE TO NOTICE OF VIOLATION

Attachment A
Page 4 of 8

description in Section 5.4.7.1.1 was merely in error and would be corrected through its FSAR upgrade program. The justification was similar to that used in the 1993 change to Figure 5.4-14c and a safety evaluation was not performed."

The additional review referred to in the above statement was performed prior to the identification of this issue by the inspector, and was performed as a normal part of the FSAR upgrade program. As a result of reviewers' comments during the upgrade review concerning FSAR section 5.4.7.1.1, an investigation was initiated to determine the origin of the FSAR statement indicating the RHR minimum flow valve to be open in standby. It was concluded that the statement was erroneously introduced into the FSAR in 1995 by Amendment 51 (Power Uprate Amendment). The current FSAR upgrade program revealed several sources of information showing the valve to be closed in standby. The RHR functional control diagram and system flow diagrams, the Technical Specification Bases, and FSAR Figure 6.2-16 all indicate the valves to be closed in standby. Similar to the 1993 assessment, based on information in these other sources, it was our conclusion that the FSAR statement was an administrative error, and that no safety evaluation was necessary to correct the error.

Additionally, we wish to make one clarification to the statement of violation in the Notice of Violation. The incorrect FSAR statement referred to in the Notice of Violation, regarding the standby position of the RHR outboard injection valve, was introduced in the same paragraph as the erroneous information pertaining to the standby position of the minimum flow valves. The paragraph was introduced in FSAR Amendment 51 (Power Uprate Amendment), which was implemented in 1995. The reviews done in association with the FSAR upgrade program had identified both these errors independent of the citing by the resident inspector.

Although these errors were not cited under 10 CFR 50.71(e) as failures to update the FSAR, we believe that enforcement discretion should be applied when considering the violation citing against 10 CFR 50.9. This would be consistent with the intent of the discretionary enforcement policy for licensees undertaking FSAR upgrade programs.

Corrective Actions Taken and Results Achieved

A 10 CFR 50.59 safety evaluation has been performed to determine that the present closed-in-standby position of the RHR minimum flow valves does not represent an Unreviewed Safety Question.

Corrective Steps That Will Be Taken to Avoid Further Violations

A review of the FSAR sections and figures for the low pressure core spray and high pressure core spray systems will be performed to confirm similar discrepancies do not exist between field system configurations and FSAR descriptions.

NRC INSPECTION REPORT 98-06, RESPONSE TO NOTICE OF VIOLATION

Attachment A

Page 5 of 8

Date of Full Compliance

Full compliance was achieved on June 5, 1998 when the 10 CFR 50.59 safety evaluation for the RHR minimum flow valves was approved by plant management.

VIOLATION C

Restatement of Violation C

10 CFR Part 50, Appendix B, Criterion III, "Design Control," requires measures be established to assure that applicable regulatory requirements and the design bases are correctly translated into specifications, drawings, procedures, and instructions.

Contrary to the above, as of January 1, 1998, the function of the residual heat removal (RHR) system in performing its low pressure coolant injection (LPCI) function, was not adequately translated into plant procedures and instructions. Specifically, the licensee's loss-of-coolant-accident analysis assumes that the RHR system will meet its LPCI functional requirements by providing full flow to the vessel 66 seconds after initiation of the event. However, RHR system operating and surveillance procedures allowed for the suppression pool return valve to be full open, which had the potential to delay full LPCI injection flow for up to an additional 66 seconds.

This is a Severity Level IV violation (Supplement I).

Response to Violation C

The Supply System accepts the violation.

Reason for Violation C

Prior to 1995, procedural controls were in place in RHR surveillance procedures to declare the system inoperable when operated in the test mode. In 1995 the surveillance procedures were changed to remove the steps declaring the system inoperable. The justification given for the procedure changes was taken from LER 93-01 which contained discussions allowing RHR system operation in the suppression pool cooling and spray modes without declaring the system inoperable. The personnel involved in the 1995 surveillance procedure changes failed to consider the assumptions made in LER 93-01 which would allow continued RHR system operability only if the full flow test valve opening time was minimized such that the required valve closure time for achieving timely LPCI injection could be maintained. This apparent misunderstanding of the intent of LER 93-01 led to the inappropriate deletion of the surveillance procedure steps to declare the system inoperable when in the test mode.

Procedural controls in the form of notes did exist in the RHR system operating procedure to minimize the full flow test valve opening time during operation in the suppression pool cooling and suppression pool spray modes. Experience has shown that full flow is established when the valve

NRC INSPECTION REPORT 98-06, RESPONSE TO NOTICE OF VIOLATION

Attachment A

Page 6 of 8

has stroked approximately 15% to 20% open. When 20% open, the valve can reposition to closed to facilitate LPCI injection time well within LOCA analysis assumptions. Interviews with Operations personnel verified these procedural notes were routinely followed, and valve opening time was minimized.

Corrective Actions Taken and Results Achieved

The personnel responsible for the 1995 change to the RHR surveillance procedures have been counseled concerning the importance of fully exploring the basis and justification for proposed procedure changes.

The RHR system procedures have been enhanced to limit the opening time of the RHR full flow test valves to 20 seconds.

RHR system surveillance procedures have been revised to declare the RHR system inoperable for the LPCI function when the full flow test valve is opened during stroke time testing.

Corrective Steps That Will Be Taken to Avoid Further Violations

All corrective actions have been completed.

Date of Full Compliance

Full compliance was achieved on April 28, 1998 when RHR surveillance procedure changes were completed to declare the RHR system inoperable for the LPCI function when the full flow test valve is opened during stroke time testing.

VIOLATION D

Restatement of Violation D

WNP-2 Technical Specification 5.4.1.a requires written procedures to be established, implemented, and maintained for activities covered under Regulatory Guide 1.33, Revision 2, Appendix A, February 1978;

Appendix A of Regulatory Guide 1.33 includes access control to radiation areas, including a radiation work permit system, as an activity requiring written procedures.

PPM 11.2.7.3, Revision 15, "High and Very High Radiation Area Controls," provides the radiological protection requirements for entry into these areas. Section 5.2 of PPM 11.2.7.3 states that access to high radiation areas, posted at greater than 1000 mrem/hr, shall be controlled by means of a radiation work permit that includes dose rates in the immediate area. Section 5.2 also requires that any time a door to a high radiation area, posted at greater than 1000 mrem/hr, is

NRC INSPECTION REPORT 98-06, RESPONSE TO NOTICE OF VIOLATION

Attachment A

Page 7 of 8

unlocked, a health physics qualified individual shall provide positive access control of the area while the door is unlocked.

Contrary to the above, on April 3, 1998, during an instrumentation and controls surveillance being performed in a high radiation area, posted at greater than 1000 mrem/hr, the licensee failed to implement the requirements of PPM 11.2.7.3 in that:

- (1) The instrumentation and controls technician performing the surveillance was utilizing a radiation work permit that did not allow entry into high radiation areas and did not provide the dose rates in the immediate area, and
- (2) While the door to the high radiation area was unlocked, a health physics qualified individual did not maintain positive access control to the area.

This is a Severity Level IV violation (Supplement III).

Response to Violation D

The Supply System accepts the violation.

Reason for Violation D

The Supply System agrees with the statement of the Violation, and with the description of this event given in the Report Details.

Our investigation of this event revealed that there were several opportunities to prevent this occurrence. First, the radiation work permit (RWP) used to perform the work was deficient. The ALARA planners responsible for the RWP assumed the boundaries of the existing high radiation area (areas greater than 1000 mrem/hr) would be moved by the attending health physics (HP) technician to allow the work activity to be performed in a radiation area. To their knowledge, this was how this work activity had been performed in the past. They did not realize the current interpretation of Technical Specification 5.7.2.f did not allow the boundary to be temporarily moved. Second, the maintenance technicians involved in the work did not thoroughly read and understand the existing RWP for the work activity which did not allow work in high radiation areas. Both maintenance technicians stated they had read the RWP but had not noted the statement restricting entry into high radiation areas (the last of seven special instructions on the RWP). Both technicians were very familiar with the areas near the intended work area where high radiation doses existed. Third, the attending HP technician did not properly implement procedure requirements to provide access control for high radiation areas. For a short period of time the HP technician failed to provide continuous HP coverage while he surveyed a swipe at a nearby radiation monitor

NRC INSPECTION REPORT 98-06, RESPONSE TO NOTICE OF VIOLATION

Attachment A

Page 8 of 8

Corrective Actions Taken and Results Achieved

The two maintenance technicians have been counseled to reinforce the need to read in detail and fully understand the requirements of RWPs governing their work activities.

The attending HP technician has been counseled to reinforce the procedural expectations for providing continuous coverage for work in high radiation areas (greater than 1000 mrem/hr).

The model work order for this activity has been changed to require an appropriate RWP.

Corrective Steps That Will Be Taken to Avoid Further Violations

Work package planners will be briefed on the lessons learned from this event.

ALARA planners will be briefed on the need to require specific instructions for RWPs for plant work activities when planning work packages, and not to assume existing radiation boundaries will be moved to accommodate work activities.

HP technicians will be briefed concerning the need to require appropriate RWPs and to discontinue the practice of de-posting a high-high radiation area when it is reasonable to lock the area.

Date of Full Compliance

Full compliance was achieved on April 3, 1998 when the HP and maintenance technicians exited the high radiation area leaving the area locked and properly posted.