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 AUTH. NAME: PARRISH, J.V. AUTHOR AFFILIATION: Washington Public Power Supply System
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SUBJECT: Responds to NRC 921007 ltr re violations noted in insp rept
 50-397/92-25. Corrective actions: log sheet for pink copy of
 MWR will be proceduralized by 921130.

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WASHINGTON PUBLIC POWER SUPPLY SYSTEM

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November 6, 1992
G02-92-250

Docket No. 50-397

U. S. Nuclear Regulatory Commission
Attn: Document Control Desk
Mail Station P1-137
Washington, D. C. 20555

Gentlemen:

Subject: WNP-2, OPERATING LICENSE NO. NPF-21
NRC INSPECTION REPORT 92-25
RESPONSE TO NOTICE OF VIOLATION

The Washington Public Power Supply System hereby replies to the Notice of Violations contained in your letter dated October 7, 1992. 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.

Your letter transmitting the Inspection Report requested a description of the short term actions taken to clarify management's policy to Supply System personnel regarding procedural adherence. The following describes the corrective actions taken to date.

Short term corrective actions have been implemented to reinforce the Supply System policy on procedural adherence. This policy has been more explicitly defined in the Use of Controlled Plant Procedures and the Conduct of Maintenance procedure. The Deputy Managing Director defined the Standards of Performance for procedural compliance in a memo to Senior Management personnel in July 1992. This memo further directs management at all levels to discuss the performance standards with their personnel. The Assistant Managing Director of Operations (AMDO) expectations, communicated in a memo entitled "Call Time Out", are that personnel are to stop work to resolve questions and/or difficulties regarding execution of a procedure. The Deputy Managing Director has reiterated management expectations in employee meetings in September 1992 and explained the absolute

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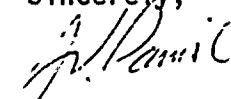
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NRC INSPECTION REPORT 92-25
RESPONSE TO NOTICE OF VIOLATION

necessity for procedure compliance. On October 28, 1992, the Plant Manager held a special staff meeting with Plant managers and supervisors to communicate his expectations for strict procedural compliance. Included in this discussion was the accountability of the employee and his Supervisor for strict procedural compliance and a review of our discipline policy for violation of our expectations. The Plant Manager has directed Plant personnel to initiate a Problem Evaluation Request (PER) for each occurrence of a procedural non-compliance. A Quality Action Team (QAT) on Standards and Expectations was commissioned in August 1992 to establish a set of standards and expectations that will apply to all Supply System employees. This new standard contains clear expectations on procedural compliance.

Strict adherence to procedures is the Supply System standard to operate and maintain WNP-2 safely and efficiently. Plant personnel are directed that if an activity requiring a procedure cannot be performed due to a lack of an existing procedure or an inadequate procedure, do not proceed with the task. All employees are expected to implement this standard into their activities. The Supply System management is committed to this standard and will continually emphasize the need for procedural compliance. This emphasis includes "self-checking" training of Plant personnel on a continuing basis. Egregious violations or instances of individual non-compliance will be evaluated with disciplinary actions taken where appropriate.

The discipline cited in these NOV responses were typically verbal counseling. Recent cases where there were failures of strict procedural compliance were dealt with more aggressively. Disciplinary action taken in association with the core power oscillation event demonstrates management commitment to holding personnel at all levels of the organization accountable for their actions.

Sincerely,



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

REF/bk

Attachments

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

APPENDIX A

During an NRC inspection conducted on July 13 through August 14, 1992, five 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 (1992), the violations are listed below:

- A. Criterion XI of 10 CFR Part 50, Appendix B, "Test Control," states in part that: "A test program shall be established to assure that all satisfactorily in service...is performed in accordance with written test instructions..."

Administrative Procedure PPM 1.3.7, "Maintenance Work Request," Revision 12, Section 1.3.7.12, requires post maintenance and post modification test instructions to be specified on a Maintenance Work Request (MWR) and Section 1.3.7.14 requires that MWR test instructions be performed.

Maintenance Work Request (MWR) AR4743 (steps 12-15) provided post maintenance test instructions for a replaced Reactor Core Isolation Cooling (RCIC) system transfer switch (RCIC-RMS-RSTS52) to demonstrate that the new switch would perform satisfactorily in service. Steps 12-15 required manipulation of the switch and verification that the proper system responses were obtained.

Contrary to the above, test steps 12-15 in MWR AR4743 were not performed, and the RCIC system was declared operable on July 11, 1992.

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

Validity of Violation

The Supply System acknowledges the validity of this violation. The root cause of this event was personnel work practices were less than adequate because procedures were not followed correctly. The Plant procedure for MWRs provides a mechanism for the Operations Department to track MWRs currently being worked. This mechanism consists of providing Operations (in the main Control Room) with a pink copy of each MWR approved to be worked. The pink copy indicates to Operations that the associated MWR is active and either the field work or the post-maintenance testing (PMT) under the MWR has not been completed. Per procedure, this pink copy may be removed from the Control Room under two conditions: if the work is complete and the PMT has been performed satisfactorily, or if the work is going to be delayed (unplanned) for more than 24 hours. In this instance, the work had been completed on May 8, 1992. The operating restraints placed on the RCIC System for the transfer switch work were removed per procedure on May 9, 1992 to allow the PMT. However, the PMT was being delayed for several days because other unrelated maintenance activities placed restraints on the RCIC System. This prevented the PMT from being performed. Contrary to the MWR procedure, the pink copy was removed from



the Control Room on May 13, 1992 by a Maintenance supervisor because of the PMT delay. The MWR procedure did not authorize removal of the pink copy from the Control Room for the condition where the equipment is awaiting PMT following completion of the specified maintenance work. The Maintenance supervisor had been urged by Operations personnel to remove the pink copies of MWRs that had been delayed for more than 24 hours. This provides a status to Operations of the maintenance work that is currently ongoing in the Plant.

The pink copy of the subject MWR had been inappropriately removed by a Maintenance supervisor with the intent of transferring the PMT requirements from the MWR work instructions to the Operability Check Sheet (OCS). The OCS delineates actions required to be taken by Operations before the affected equipment can be declared operable. The Maintenance supervisor had planned to submit the revised MWR package to the Plant Work Control Group (WCG) to schedule the associated OCS activities. However, the revised MWR package was not submitted to WCG for scheduling the OCS activities until July 30, 1992. The outstanding operating restraints against RCIC were removed June 29, 1992. Removal of the operating restraints made the system functional but not operable as defined by the Technical Specifications because the PMT had not yet been performed. The only methods available to Operations to assess the status of systems removed from service to perform maintenance were the physical location of the pink copy of the MWR and the status of the operating restraints against the given system. With removal of the outstanding restraints and inadvertent removal of the pink copy of the MWR from the Control Room for the RCIC System as described above, there was nothing to indicate to Operations that a PMT needed to be performed on the system. Therefore, the RCIC System was considered operable for the July 4, 1992 startup from the refueling outage without performance of the required PMT.

A contributing cause to this event was inadequate administrative control to provide Operations with an accurate status of the RCIC System. An informal log was maintained in the Control Room documenting when the pink copy of an MWR was removed from the Control Room and by whom. In this case, the log sheet had been completed properly. The log did not provide for documenting the reason for removal of the pink copy nor did it provide the status of the equipment at the time the copy was removed. This information could have prevented Operations from declaring the RCIC System operable until the required PMT was performed.

Corrective Steps Taken/Results Achieved

1. This event has been discussed with the individual responsible for the non-compliance of the MWR procedure. The review emphasized that procedure compliance is mandatory and departure from established procedures is forbidden.
2. The log practices for removal of the pink copy of an MWR from the Control Room were changed to require documentation of the reason for removal of the copy and to provide a status of the affected equipment. Shift Manager approval is also required to remove the pink copy.



Corrective Action to be Taken

The log sheet for the pink copy of the MWR will be proceduralized by November 30, 1992.

Date of Full Compliance

WNP-2 was in full compliance when the PMT was satisfactorily performed on the RCIC System on August 1, 1992. The transfer switch operated as designed, and was therefore operable during the period the RCIC System was considered operable without performance of the PMT.

- B. Criterion XI of 10 CFR Part 50, Appendix B, "Test Control," requires in part that: "A test program shall be established to assure that all testing required to demonstrate that...components will perform satisfactorily in service is identified and performed in accordance with written test procedures which incorporate the requirements and acceptance limits...."

Administrative Procedure PPM 1.3.7, "Maintenance Work Request, Revision 12, Section 1.3.7.12, requires post maintenance and post modification test instructions to be specified on a Maintenance Work Request (MWR) and Section 1.3.7.14 requires that MWR test instructions be performed.

Maintenance work request AR8673 provided test instructions for a modification to Reactor Core Isolation Cooling (RCIC) system control power supplies. Prerequisite 1 specified the acceptance limits for the RCIC system power supply output voltage to be 24 ± 1 volts DC. Steps 19 and 20 of the MWR specified the voltage acceptance limits at six system locations to be 48 ± 2 volts DC.

Contrary to the above, on June 19, 1992, the acceptance limits for prerequisite 1 were not met in that voltage was recorded as 26.17 volts DC; on June 27, 1992, the acceptance limits of steps 19 and 20 were not met in that voltages were recorded as 52.6, 52.3, 50.9, 50.7, and 50.5 volts DC.

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

Validity of Violation

The Supply System acknowledges the validity of this violation. The root cause of this event was personnel work practices by a Contractor supervisor were less than adequate because procedures were not followed correctly. Contractor personnel measured and recorded the above described voltages twice, as a prerequisite requirement on June 19, 1992 and for post-modification testing on June 27, 1992. In both cases, the Contractor foreman recognized the measured values were not within the acceptance limits provided in the MWR and brought it to the attention of the System



Engineer and Contractor supervision. Each time, the System Engineer indicated the measured values were acceptable, but the affected work instructions needed to be revised. Contrary to the MWR procedure PPM 1.3.7, the Contractor supervisor instructed the Contractor foreman to proceed with the work instructions, without revising the affected work instructions. Upon completion of the work instructions, the Contractor foreman's supervisor signed the MWR as field work complete on June 30, 1992, indicating that all work was performed within accepted limits. However, the work instructions were not revised to change the acceptance limits of the power supply voltage. As a result, the work was performed contrary to the MWR procedure which required satisfactory completion of the preceding steps prior to proceeding with the work instructions.

Upon later review of the subject MWR by the System Engineer, the voltage checks for the 48 VDC power supply for the RCIC Turbine Governor were found to be outside the acceptance limits. As a result, the System Engineer initiated Problem Evaluation Request (PER) 292-0971 on August 11, 1992 to document the discrepancy. The measured voltages were determined acceptable and the equipment was determined operable.

Corrective Steps Taken/Results Achieved

This incident was discussed with the personnel involved in the non-compliance of the MWR procedure. The review emphasized that procedure compliance is mandatory and departure from established procedures is forbidden.

Supply System management emphasized to the Contractor management that procedural compliance is mandatory.

Corrective Action to be Taken

No further corrective actions were identified.

Date of Full Compliance

WNP-2 was in full compliance when the as-measured power supply voltages were determined acceptable on August 11, 1992.

- C. Technical Specification 6.8.1 states that: "Written procedures shall be established, implemented and maintained covering...applicable procedures recommended in Appendix A of Regulatory Guide 1.33, Revision 2, February 1978...." Appendix A of Regulatory Guide 1.33 specifies procedures for temporary changes, procedure adherence, surveillance tests and performing maintenance.

Procedure PPM 1.2.3, "Use of Controlled Plant Procedures," Revision 17, dated November 14, 1991, required in part: "Any person performing a task for which there is a procedure is responsible for doing the job as described by the procedure. When a procedure is unable to be performed as approved...a procedure deviation shall be initiated to allow the procedure to be performed."

Contrary to the above, established procedures were not implemented on three separate occasions:

- (1) Annunciator Response Procedure No. 4.601.A2, Revision 4 requires in part, that in response to an RHR pump B discharge pressure high/low alarm, the operator confirm that valve RHR-V-16B was closed.

Procedure PPM 1.2.2, "Plant Procedure Preparation," includes in the definition of the term "confirm," "...an implied requirement to take corrective action if the identified conditions do not exist."

Contrary to the above, during the performance of "RHR Loop B Operability Test," Procedure PPM 7.4.5.1.9, on July 16, 1992, the operator, in response to an RHR pump B discharge pressure low alarm, failed to confirm that RHR-V-16B was closed. The valve was open and remained open for several hours.

- (2) Inservice Test Procedure PPM 7.4.6.3.3, "CSP and CEP Containment Isolation Valve Operability," erroneously stated in part that "stroke time measurement terminates when the corresponding position indicating light becomes lit." Accepted industry practice terminates stroke time measurement, for dual position indication valves, after the corresponding position indication becomes lit and the opposite indication becomes unlit.

Contrary to the above, during performance of Procedure PPM 7.4.6.3.3, on August 12, 1992, the operator did not perform the test as described by the approved Procedure PPM 7.4.6.3.3 nor did the operator initiate a procedure deviation to allow the procedure to be performed correctly. The operator measured the stroke time test per the accepted industry practice.

- (3) Standby Service Water heat exchanger test Procedure PPM 8.4.70, "Thermal Performance Testing of PRA-FC-1A and PRA-FC-1B," Section 7, required that a clamp-on ultrasonic flow meter be installed.

Contrary to the above, on July 29, 1992, the technician performing Procedure PPM 8.4.70 failed to install a clamp-on ultrasonic flow meter.

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

Validity of Violation

The Supply System acknowledges the validity of the violation. A root cause common to the three incidents described above was personnel work practices were less than adequate because procedures were not followed correctly.



The first incident occurred while performing a quarterly surveillance on the Residual Heat Removal (RHR) Loop B. The surveillance required the lower Drywell spray outboard isolation valve, RHR-V-16B, to be opened. When the valve was opened by the Reactor Operator (RO), a system low pressure alarm annunciated. A failure of the affected RHR loop can result due to water hammer if the system is actuated with a low pressure condition in the RHR piping. The annunciator response procedure required the RO to confirm that RHR-V-16B and other listed valves were closed. Based on previous experience, the RO knew that a low pressure condition would occur during this evolution. The line between RHR-V-16B and the inboard isolation valve RHR-V-17B had been previously drained prior to opening RHR-V-17B to prevent contaminated water from spraying on personnel in the Drywell. Upon opening the RHR-V-16B, the flow rate into the drained section of RHR piping exceeds the capability of the keep fill pump, RHR-P-3, and a low pressure alarm occurs. The ROs expect this condition to occur during performance of the surveillances for the containment isolation spray valves. Believing it would not be a sustained low pressure condition, the RO did not follow the annunciator response procedure, and as a result, the RHR-V-16B remained open for several hours. The pressure in the system was restored with the operating keep fill pump, RHR-P-3, within a few minutes and the RO reset the annunciator alarm. The root cause of this incident was that the RO failed to correctly follow Plant procedures. The valve should have been closed and a Problem Evaluation Report (PER) initiated to document the abnormal condition.

The low pressure condition also occurs on RHR Loop A during performance of a similar surveillance procedure. The practice of leaving the outboard isolation valve open in response to the low pressure condition during performance of this procedure had been accepted practice. A contributing cause to this event was management methods in that procedure compliance was not adequately enforced at the Control Room supervisory level. This condition was recognized as a chronic problem, but no action was taken to enforce management policy by either performing the tasks required by the annunciator response procedures or changing the procedures to allow the appropriate actions to be taken. The surveillance procedure did not provide a caution of possible occurrence of this condition, nor did it provide steps to preclude its occurrence. Another contributing cause to this incident was inadequate instructional provisions in the procedures to warn of or preclude the possible low pressure condition.

The second incident occurred during the performance of the quarterly surveillance for the Containment Supply Purge (CSP) and the Containment Exhaust Purge (CEP) system Containment Isolation Valve Operability. The procedure stated that the stroke time measurement terminates when the corresponding position indicating light illuminates. These valves have dual position indication. The correct method for stroke time measurement of dual position indication valves is to initiate time measurement when the control switch is turned to either open or close. Time measurement



is terminated when the indicating light opposite to the direction of travel extinguishes. The RO performing the test recognized the error in the procedure, stroked the valves in question using the correct method and recorded this data. This was not in accordance with the procedure. Consequently, the RO failed to follow procedure. The test should have been stopped and the procedure should have been revised or deviated in accordance with established Plant procedures. In addition, a PER should have been written to address a possible generic problem with ASME valve In-service Test (IST) surveillance procedures.

The first root cause of this incident was that the work practices of the RO were less than adequate because the Plant procedures were not followed correctly. The second root cause of this incident was omission of relevant information in the surveillance procedure. If the proper directions had been included in the procedure, the RO would not have violated Plant procedures.

The difference between the procedure instruction and the correct method for stroke time measurement has been a chronic problem. The accepted practice has been to use the correct method contrary to the procedure direction. Consequently, a contributing cause to the event was management method in that procedure compliance was not adequately enforced at the Control Room supervisory level.

If the stroke time measurements were obtained per the incorrect procedure instructions, the stroke times would have been a fraction of a second. This would have been outside the acceptance criteria and would have resulted in corrective actions. The ROs are trained to the correct method of stroke time testing. Based on this, the previous test results are considered acceptable and the affected valves are considered to have satisfied their operability requirements.

The third incident occurred during performance of the Thermal Performance Testing of the Standby Service Water (SW) Pump House Return Air (PRA) heat exchanger. The test procedure required that an ultrasonic flow meter be installed to provide backup data to a permanently installed flow sensor in the system. This procedure is used to gather trending information on the heat exchangers. The Supply System technician installed the flow meter as required by the procedure, but the data were invalid because of the location. The flow meter was removed with the intention of reinstalling it in another location on the piping. However, the test proceeded without the flow meter being reinstalled. The root cause of this incident was that the procedures were not followed correctly.

Corrective Steps Taken/Results Achieved

The above described incidents were reviewed with the personnel involved in the non-compliance of the respective procedures. The review emphasized that procedure compliance is mandatory and departure from established procedures is forbidden.

With regard to the first incident, the appropriate RHR surveillance procedures have been changed to preclude occurrence of the system low pressure condition experienced when the lower DW spray outboard isolation valve was opened. The surveillance procedure for the CSP and CEP isolation valves have been changed to include the proper stroke time measurement method information to preclude recurrence of the second incident. In addition, eleven of twenty-three ASME valve IST surveillance procedures have been changed to reflect the proper stroke time measurement methodology for dual position indication valves. The test procedure described in the third incident was changed to remove the requirement to use the ultrasonic flow meter.

Corrective Action to be Taken

The remaining twelve ASME valve IST surveillance procedures will be changed by November 30, 1992 to reflect the proper stroke time measurement methodology for dual position indication valves. If a procedure needs to be performed to satisfy the Technical Specification surveillance requirements, the procedure will be changed before it is used.

Date of Full Compliance

WNP-2 will be in full compliance when the ASME valve IST surveillance procedures are changed by November 30, 1992.

- D. Technical Specification 6.8.1 states that: "Written procedures shall be established, implemented and maintained covering...applicable procedures recommended in Appendix A of Regulatory Guide 1.33, Revision 2, February 1978...." Appendix A of Regulatory Guide 1.33 specifies procedures for temporary changes, procedure adherence, surveillance tests and performing maintenance.

Contrary to the above, applicable procedures were not implemented on several occasions. Two examples are detailed below:

- (1) Administrative Procedure PPM 1.3.7, "Maintenance Work Request, Revision 12, Section 4, requires in part that "The MWR [maintenance work request] is the document used to initiate and record maintenance activities or to implement and record Plant Modifications." Section 1.3.7.14 requires that MWR test instructions be performed.

MWR AR5692, for 250 volt DC battery replacement, step H, required that battery condition data be recorded; steps L and M required recording additional battery data every 24 hours for 94 hours.

Contrary to the above, on May 4, 1992, data was not recorded in MWR AR5692 as directed by step H; the data directed by step L and M was recorded on May 5 and 6, 1992 only, a period of less than 94 hours.

- (2) Procedure PPM 1.2.3, "Use of Controlled Plant Procedures," Revision 17, dated November 14, 1991, required in part: "Any person performing a task for which there is a procedure is responsible for doing the job as described by the procedure.

Administrative Procedure PPM 1.5.1, "Technical Specification Surveillance Testing Program," Revision 26, dated February 6, 1991, Section 1.5.1.4.C, states that "Prerequisites...are required to have a signature blank for...verifying compliance with the prerequisite."

Contrary to the above, as of August 14, 1992, Procedure PPM 7.4.7.3.3B, "RCIC Quarterly Operability Test," Prerequisite 3.1, which required the reactor to be between 920 psig and 1020 psig, had no signature blank for verifying compliance with the prerequisite.

Contrary to the above, as of August 14, 1992, Procedure PPM 7.4.3.7.5.18, "Accident Monitoring Instrumentation RCIC Flow Indication CC," Prerequisite 3.4, which required the shift manager to verify that RCIC system testing would not be affected by the operability status of any ECCS system, had no signature blank for verifying compliance with the prerequisite.

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

Validity of Violation

The Supply System acknowledges the validity of this violation. A root cause common to the examples described above was personnel work practices were less than adequate because procedures were not followed correctly.

In the first example, the subject MWR provided for replacement of the 250 Volt DC station battery. Following replacement, Step H of the MWR work instructions required that battery data be recorded following a minimum 24 hour stabilization charge. The data were recorded on May 6, 1992, but on the wrong data sheet. The data sheet was included in the MWR package. Completion of Step H marked the end of the stabilization charge. Steps L and M of the work instructions required that battery data be recorded once every 24 hours for 94 hours following completion of the stabilization charge and initiation of the equalization charge. These data were recorded on two data sheets, but had been filed separately from the MWR package. The data were poorly recorded but were evaluated to have satisfied the intended requirements of the work instructions. The 94-hour requirement was to satisfy vendor warranty requirements. The as-recorded data did not affect operability of the battery.



The root cause of this event was that personnel work practices were less than adequate because the procedures were not followed correctly, resulting in improper recording of data. Technical Specification surveillances performed on the battery after installation verified operability of the battery.

With regard to the second example of prerequisite signoff described above, the procedure writers followed primarily the guidance of Plant Procedure PPM 1.2.2, Plant Procedure Preparation. This procedure does not require the inclusion of a signoff space for prerequisites of surveillance procedures. The procedure writers were not aware of the prerequisite signoff requirement included in PPM 1.5.1. The root cause of this condition was personnel work practices were less than adequate because the Plant procedures were not followed correctly.

Corrective Steps Taken/Results Achieved

PPM 1.2.3, "Use of Controlled Plant Procedures", defines management's expectations that performance of all prerequisites is mandatory.

Corrective Action to be Taken

PPM 1.5.1 will be changed November 13, 1992 to delete the prerequisite signature requirement.

Date of Full Compliance

WNP-2 will be in full compliance by November 13, 1992, when PPM 1.5.1 is changed.

- E. Technical Specification 4.0.5 stated in part that "Inservice testing of American Society of Mechanical Engineers (ASME) Code Class 1, 2, and 3 pumps and valves shall be performed in accordance with Section XI of the ASME Boiler and Pressure Vessel Code (CODE) and applicable Addenda."

Subarticle IWP-4120 of Division 1 of Section XI of the ASME Code stated that "The full-scale range of each instrument shall be three times the reference value or less."

Contrary to the above, as of August 12, 1992, Residual Heat Removal (RHR) surveillance procedure PPM 7.4.5.1.8, "RHR Loop A Operability Test," required (and completed quarterly test data sheets showed) measurements of the pump discharge pressure for pump RHR-P-2A by instrumentation with a full-scale range of 0-600 pounds per square inch gauge (psig). The reference value for this pump parameter was 138.3 psig, which requires a maximum scale range of 415 psig or less.

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



Validity of Violation

The Supply System acknowledges the validity of this violation. The surveillance procedures allowed use of data obtained from the Transient Data Acquisition System (TDAS) or panel gauges when TDAS was unavailable. Evaluation of the accuracy of selected instruments on RHR Loops A, B and C, the High Pressure Core Spray (HPCS) System and Reactor Core Isolation Cooling (RCIC) System determined that the panel gauges and the TDAS data did not satisfy the full-scale range requirements of the ASME Code. These instruments were included in the original design of the systems.

The first root cause for failing to satisfy the ASME Code accuracy requirements was a design deficiency of the affected systems. Appropriately ranged instruments were not provided with the systems to obtain operability test data within an acceptable accuracy. The second root cause of this condition was personnel work practices were less than adequate. The intended verification in the development and performance of the surveillance procedures was not performed to ensure the appropriate gauges were being used.

Corrective Steps Taken/Results Achieved

Current design review practices require a more thorough review to ensure ASME Code requirements are satisfied before new or modified equipment is accepted for use.

Further evaluation determined that TDAS data satisfied the technical accuracy requirements of the Code. A Basis for Continued Operation (BCO) was developed to demonstrate the acceptability of using TDAS data only to perform operability surveillances. The BCO determined that the loop accuracy of the TDAS measurement is 1% of full scale of the sensor versus 2% for the panel gauges. The lower TDAS accuracy error satisfies the ASME Code accuracy error requirements even though the sensors may not satisfy the full scale range requirements of the Code. The panel gauges are outside both the full scale range and accuracy requirements of the Code, and therefore, are not suitable for use in performing Technical Specification surveillances. The appropriate surveillance procedures have been changed to only allow the use of TDAS data where corresponding panel gauges do not satisfy the Code accuracy requirements. Where TDAS instruments are unavailable, appropriately ranged instruments will be used to perform the surveillance tests. In addition, the accuracy of instruments used in other Technical Specification surveillances were reviewed and found to be within the ASME Code acceptable values.

Corrective Action to be Taken

1. This response will be reviewed by personnel by December 31, 1992 involved in preparing test procedures for the purpose of emphasizing the need for individual attention to detail and technical accuracy.



2. A relief request will be submitted by January 15, 1993 to obtain a waiver of the ASME Code requirements to allow use of TDAS data that exceed the full scale range requirements of the Code but satisfy the accuracy requirements.

Date of Full Compliance

WNP-2 will be full compliance when the relief request is approved. The BCO justifies current and past testing practices. Overview of past surveillance data shows no operability concerns.