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REGION IV

**WOLF CREEK**  
NUCLEAR OPERATING CORPORATION

January 11, 1993

Bart D. Withers  
President and  
Chief Executive Officer

WM 93-0006

U. S. Nuclear Regulatory Commission  
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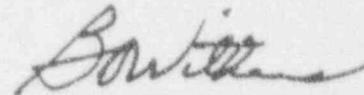
Reference: Letter dated December 11, 1992 from A. B. Beach, NRC, to  
B. D. Withers, WCNOG  
Subject: Docket No. 50-482; Response to Violations 482/9231-01,  
9231-02, and 9231-04

Gentlemen:

Attached is Wolf Creek Nuclear Operating Corporation's (WCNOG) response to violations 482/9231-01, 02, and 04 which were documented in the Reference. Violation 482/9231-01 involved the failure to revise Alarm Response Procedure ALR 00-047E to provide an alternate method of draining the Refueling Water Storage Tank. Violation 482-50/9231-02 involved inadequate post-maintenance test procedures, and violation 482-50/9231-04 concerned a failure to properly implement a procedure when changing the operating pump from the centrifugal charging pump to the positive displacement pump.

If you have any questions concerning this matter, please contact me at (316) 364-8831 extension 4000 or Mr. Kevin J. Moles at extension 4565.

Very truly yours,



Bart D. Withers  
President and  
Chief Executive Officer

BDW/jan

Attachment

cc: A. T. Howell (NRC), w/a  
J. L. Milhoan (NRC), w/a  
G. A. Pick (NRC), w/a  
W. D. Reckley (NRC), w/a

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Reply to a Notice of Violation

Violation (482/9231-01): Failure to Revise Alarm Response Procedure

Finding:

Technical Specification (TS) 6.8.1.a requires that written procedures shall be established, implemented, and maintained covering the applicable procedures recommended in Appendix A of Regulatory Guide (RG) 1.33, Revision 2, dated February 1978. RG 1.33, Appendix A, Item 5, specifies, in part, that alarm procedures should contain guidance for immediate operator action.

Alarm Procedure ALR 00-047E, Revision 4, "RWST LEV HILO," Step 4.4.3, directs personnel to drain the refueling water storage tank (RWST) to the floor and equipment drain system by using valve BN V017, RWST drain valve.

Contrary to the above, on October 22, 1992, after determining that the normal drain path from the refueling water storage tank, downstream of Valve BN V017, was blocked by a flange, the licensee failed to change ALR 00-047E to provide an alternate method of draining the tank.

Reason For The Violation:

On October 15, 1992, at 1035 CST, a RWST high level alarm was received in the control room. In accordance with Alarm Response Procedure ALR 00-047E Chemistry was requested to sample the RWST and the Auxiliary Building Watch was requested to drain some of the tank. At 1100 CST, Valve BN V017, RWST drain valve, was opened to drain some of the contents. At 1125 CST, with no apparent level change to the RWST the Control Room instructed the Auxiliary Building Watch to mechanically massage Check Valve LF V034, but again no level change was noticed. At 1139 CST, Valve BN V017 was closed. At 1229 a lineup was completed to drain the RWST to the Spent Fuel Pool using procedure SYS EC-200. This alternate method of draining the RWST was, therefore, conducted in accordance with an approved procedure. It was later determined that a flange downstream of Valve BN V017 contained a blank, therefore preventing flow through the valve. An Information Tag was placed on the Chemical and Volume Control System Panel to notify operators Valve BN V017 was inoperable and that alternate methods of draining the tank should be used. The Shift Supervisor chose to use the Information Tag for configuration control until the blockage in the line could be removed in the near future. This decision was made primarily because Procedure ADM 02-110, "Control of Information Tags" does not provide guidance on when a temporary procedure change is necessary in place of or in conjunction with an information tag. As a result a temporary procedure change was not initiated. However, appropriate actions were taken to drain the RWST.

Corrective Steps That Have Been Taken And Results Achieved:

Alarm Response Procedure ALR 00-047E, "RWST LEV HILO" was revised and approved on December 12, 1992, to include an alternate method of draining the RWST. This can be and was appropriately accomplished by transferring water to the Spent Fuel Pool utilizing Procedure SYS EC-200 which does not require the use of Valve BN V017.

Corrective Steps That Will Be Taken To Avoid Further Violations:

Procedure ADM 02-110, "Control of Information Tags" will be revised to provide guidance on when a temporary procedure change is required in place of or in conjunction with an information tag. This procedure change will be completed by June 1, 1993.

Date When Full Compliance Will Be Achieved:

WCNOC is currently in compliance with TS 6.8.1.a and Regulatory Guide 1.33. Additional guidance on temporary procedure changes will be available by June 1, 1993, upon revision of Procedure ADM 02-110.

Violation (482/9231-02): Inadequate Post-Maintenance Procedures

Finding:

Technical Specification 6.8.1.a requires that written procedures shall be established, implemented, and maintained covering the applicable procedures recommended in Appendix A of Regulatory Guide 1.33, Revision 2, dated February 1978. Regulatory Guide 1.33, Appendix A, Item 9.a, requires that maintenance that affects the performance of safety-related equipment should be properly preplanned and performed in accordance with written procedures, documented instructions, or drawings appropriate to the circumstances. This is accomplished, in part, by Procedure ADM 01-057, Revision 25, "Work Request."

Attachment 8, Step 2.A of Procedure ADM 01-057 specifies that post-maintenance testing is used to verify that the maintenance was performed correctly, that the equipment performs its intended function, and that a new deficiency has not been created.

Contrary to the above, the post-maintenance test procedures performed on September 17, 1992, in accordance with procedures and instructions specified on Work Request 04681-92 did not determine that Valve BN HV8812B, Limit Switch Rotor 3, was not properly adjusted. The misadjustment rendered Valve BB PCV8702B inoperable, which would have prevented placing Train B residual heat removal in service for long-term hot leg recirculation cooldown, if needed, for approximately 55 days.

Safety Significance:

The violation states that the inoperability of the interlock rendered Residual Heat Removal (RHR) Train B incapable of being used for hot leg recirculation. The more correct wording would have been to state that the inoperability of the interlock would have caused difficulty in placing RHR Train B in service for normal low pressure RHR cooling. Hot leg recirculation when used in conjunction with discussions of the RHR system means the post-accident LOCA lineup where the Containment Recirculation Sumps supply water to the RHR pump which in turn supply water to the RCS hot legs via an RHR connection to loops 2 and 3 and also supply water to both Safety Injection (SI) pumps for injection into all four hot legs via separate SI connections. The interlock problem would in no way have inhibited the post-accident lineup. It would have inhibited the lineup of B RHR suction to the loop 4 hot leg, but this is not the same as hot leg recirculation and is not as safety-significant as those interlocks in the post-LOCA mode malfunctioning.

Reason For Violation:

On September 17, 1992, corrective Work Request 04681-92 was performed to repair the soft clutch mechanism and replace the motor pinion gear of Valve BN HV8812B. Maintenance to the valve utilized MOV Setpoint Document E-025-00007. Due to a data transfer error from WCMA-04 to E-025-00007, Rotor 3 to BN HV8812B was incorrectly set. Performance of Procedure STS BN-201, "Borated

Refueling Water Storage System Inservice Valve Test" was required as a post-maintenance test. STS BN-201 provides guidance for stroke time testing of valves that are located in the flow path from the refueling water storage tank to safety-related pumps. This is accomplished, in part, by stroking Valve BN HV-8812B and verifying the indicating light on the control switch, and measuring the valve closing time. STS BN-201 was successfully completed with no problems identified. On November 7, 1992, while operators performed STS BN-201, it was noted that the engineered safety features status panel light indications for Valve BN HV8812B occurred in a different order than expected. STS BN-201 does not require operators to monitor the status panel indicating lights. Although STS BN-201 was successfully completed, this post-maintenance testing did not identify that Limit Switch Rotor 3 was incorrectly set.

Several additional factors contributed to the failure to identify Rotor 3 to Valve BN HV-8812B was incorrectly installed. Section 8.2 of Procedure MGE E00P-02, "Limitorque Operator Maintenance", requires workers to request operators to cycle the valve being worked and verify the correct Indicating Light, Computer, Status Panel, and Interlocking Contacts. During restoration on September 17, 1992, the status panel was inoperable due to a blown fuse. The interlock contacts were also not checked because of the assumption that the interlocked valve would be stroked during post-maintenance testing. Because MOV Setpoint Document E-025-00007 was incorrect, testing the interlock contact for continuity would not have identified the incorrect setting.

Corrective Steps That Have Been Taken And Results Achieved:

MOV Setpoint Document E-025-00007 has been revised appropriately. A review of similar design documents was also performed. Four documents contained similar mistakes and have been corrected. These changes should prevent a similar error from occurring in the future. To enhance post-maintenance testing, status panel indication tests are presently being added to applicable Surveillance Technical Specifications (STS) procedures for Motor-Operated Valves. ADM 08-240, "Post Maintenance Testing" was revised on December 21, 1992 to establish WCNOG-97, "Recommended Post Maintenance Testing", and an electronic post-maintenance database.

Corrective Steps That Will Be Taken To Avoid Further Violations:

The post-maintenance testing instructions for Motor-Operator Valves will be added to applicable work requests as a supplemental sheet stating specific retest functions. The instructions will be added to WCNOG-97 as part of the ongoing collection of recommended and mandatory tests. A component specific electronic matrix of mandatory and recommended post-maintenance tests is presently in test, and if successful, may eventually replace or augment WCNOG-97.

Date When Full Compliance Will Be Achieved:

Revision of E-025-00007 and similar documents prevented a similar condition from occurring, therefore WCNOG is in compliance with Technical Specification 6.8.1.a and Regulatory Guide 1.33, Appendix A. It is anticipated that the use of the component specific electronic matrix will be successful in eliminating problems of this nature when it becomes available and has been adequately tested. In the interim WCNOG-97 provides a selection of available tests to be specified to assist in developing post-maintenance testing instructions. WCNOG-97 was implemented on December 23, 1992.

Violation (482/9231-04): Failure to Properly Implement an Approved Procedure

Finding:

Technical Specification 6.8.1.a requires that written procedures shall be established, implemented, and maintained covering the applicable procedures recommended in Appendix A of Regulatory Guide 1.33, Revision 2, dated February 1978. Regulatory Guide 1.33, Appendix A, Item 3.n, recommends that instructions for startup, shutdown, and changing modes of operation should be prepared, as appropriate, for the chemical and volume control system. This is accomplished, in part, by Procedure SYS EG-201, Revision 15, "Shifting Between Positive Displacement Pump and Centrifugal Charging Pumps."

Step 4.2.6 of Procedure SYS BG-201 requires that operators close Valve BG HV8109, positive displacement pump recirculation valve, when changing the operating pump from a centrifugal charging pump to the positive displacement pump.

Contrary to the above, on October 1, 1992, during the implementation of Procedure SYS BG-201, the operator did not perform step 4.2.6. With Valve BG HV8109 open, a direct path was created from the positive displacement pump to the volume control tank, which resulted in an approximately 20-second decrease in letdown flow and a loss of charging flow.

Reason For Violation:

Procedure SYS BG-201, "Shifting Between Positive Displacement and Centrifugal Charging Pumps", contains instructions to place the Positive Displacement Pump (PDP) in service and secure Centrifugal Charging Pump (CCP) "A". Step 4.2.6 of SYS BG-201 requires the operator to close PDP recirculation valve BG HV8109. On October 1, 1992, while executing Procedure SYS BG-201, Revision 15 step 4.2.6 of the procedure was not performed. The root cause of this incident was determined to be cognitive personnel error in that there was a failure to follow procedure by the operator performing SYS BG-201.

Corrective Steps That Have Been Taken And Results Achieved:

On October 2, 1992, the personnel involved with this incident were counseled on their responsibility to ensure procedures are properly executed.

Corrective Steps That Will Be Taken To Avoid Further Violations:

To further ensure personnel are aware of the importance of procedural adherence, the personnel involved in this incident will prepare a presentation on the incident. This presentation will be addressed to Operations and will stress the importance of procedural adherence. It is believed that counseling by peers (i.e., "positive discipline") will be more effective than more routine disciplinary measures. The presentation is scheduled to be completed by February 28, 1993.

Date When Full Compliance Will Be Achieved:

WCNOC Operations and Senior Management continues to stress the importance of adherence to procedures. Existing policies and Operation's practices already require this. Therefore, WCNOC is currently in compliance with Technical Specification 6.8.1.a and Regulatory Guide 1.33 in this regard. The "positive discipline" presentation will be completed by February 28, 1993.