

WOLF CREEK

NUCLEAR OPERATING CORPORATION

Bart D. Withers
President and
Chief Executive Officer

March 18, 1988

WM 88-0073

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

Subject: Docket No. 50-482: Response to Violation 482/8806-01
Reference: Letter dated February 17, 1988 from L. J. Callan, NRC,
to B. D. Withers, WCNOG

Gentlemen:

Attached is a detailed response to violation 482/8806-01 which was documented in the Reference. Violation 482/8806-01 concerns a failure to have procedures appropriate to the operational circumstances. If you have any questions concerning this matter, please contact me or Mr. O. L. Maynard of my staff.

Very truly yours,



Bart D. Withers
President and
Chief Executive Officer

BDW/jad

Attachment

cc: B. L. Bartlett (NRC), w/a
R. D. Martin (NRC), w/a
P. W. O'Connor (NRC), 2 w/a

IE01
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Violation (482/8806-01): Failure to Have Procedures Appropriate to the Circumstances

Finding:

Technical Specification 6.8.1 requires that written procedures shall be established including the applicable procedures recommended in Appendix A of Regulatory Guide 1.33, revision 2, February 1978. Regulatory Guide 1.33 addresses procedures that include draining the reactor coolant system and operating the shutdown cooling system. Appendix B, Criterion V, of 10 CFR 50 requires that procedures be appropriate to the circumstances.

Contrary to the above:

- A. Procedure GEN-00-007, Revision 8, "Mode 5 - RCS Drain Down," dated October 2, 1987, was not appropriate to the circumstances. Steps were not included to ensure that the reactor vessel was vented prior to disconnecting "Conoseals." Also steps were not included that ensured indicated reactor pressure vessel water level was accurate.
- B. Procedure EJ-120, Revision 9, "Startup of a Residual Heat Removal Train," dated October 2, 1987, was not appropriate to the circumstances. The procedure did not include appropriate quantitative acceptance criteria for the operation of Valve EG-HV-101 to preclude initiating a CCW system water hammer event.

Reason For Violation:

- A. Successful use of procedure GEN-00-007, "Reactor Coolant System Drain Down", during Refuel I indicated procedural adequacy for this evolution. Therefore, during subsequent procedure reviews, no procedural inadequacies were identified.

The troubleshooting activities following the event on January 24, 1988, identified a possible design deficiency in the reactor pressure vessel water level indication that was not adequately compensated for in the procedure.

- B. Procedure EJ-120, "Startup of a Residual Heat Removal Train", did not provide sufficient detail to assure proper operation of Valve EG-HV-101. This procedure had been used successfully during Refuel I for this evolution without incident which indicated procedural adequacy. Therefore, during subsequent procedure reviews, the procedural inadequacy was not realized.

Corrective Steps Which Have Been Taken and Results Achieved:

- A. Following failure of the reactor vessel and pressurizer to vent properly, control room personnel evaluated the situation and attempted to establish an alternate vent path for the reactor vessel by

disconnecting the head vent rig from the pressurizer and routing it to a separate vent path. The pressurizer was vented through its own vent path. This attempt to vent the reactor vessel utilizing this line up, was also unsuccessful. The reactor vessel head was finally vented using the RVLIS connection to the vent rig.

Immediate actions were taken by management to determine a root cause for the event. These actions included daily discussions with plant staff and continuous oversight of the troubleshooting activities in progress to identify a probable root cause.

Various nitrogen pressure tests were performed which may have cleared any blockage that may have been present in the head vent line. This cannot be proven based on the test results obtained.

During RCS filling and venting, flow was verified through the reactor head vent valves with no abnormalities noted.

Because the root cause of the head venting failure has not yet been conclusively determined, GEN-00-007 has been enhanced to require reactor head venting through the head vent and the RVLIS connection to provide redundant means for head venting to ensure venting to zero psig prior to Conoseal disassembly.

- B. A detailed engineering evaluation of this event was performed to evaluate system integrity. Based upon a review of the system stress levels under a variety of assumed design loadings, specific examination/inspection points were recommended for areas of piping, pipe supports, weldments, and equipment most likely to experience an overstressed condition. Subsequent inspections of these recommended areas were performed and the results verified the integrity of the CCW system. In addition, a tube side hydrostatic test was performed on the RHR Heat Exchanger. The results of this hydrostatic test verified the integrity of the RHR Heat Exchanger tube-to-shell pressure boundary. In order to preclude future waterhammer events in this system, a procedure change was issued to SYS EJ-120 which limits the closure of the CCW inlet to the RHR heat exchangers to ensure CCW flow through the RHR heat exchangers is maintained during this evolution.

Corrective Steps Which Will Be Taken To Avoid Further Violations:

- A. An Engineering Evaluation Request (EER) has been issued to provide additional methods with increased reliability for RCS level indication during RCS drain down.
- B. A review of all system operating procedures has been completed to ensure appropriate quantitative acceptance criteria is included to prevent waterhammer events in similar system configurations.

Date When Full Compliance Will Be Achieved:

Full compliance has been achieved.