

# WOLF CREEK

NUCLEAR OPERATING CORPORATION

Neil S. "Buzz" Carns  
Chairman, President and  
Chief Executive Officer

June 14, 1995

WM 95-0097

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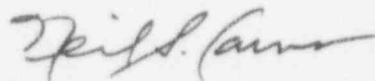
Reference: Letter dated May 19, 1995, from  
T. P. Gwynn, NRC/RIV, to N. S. Carns, WCNOC  
(Inspection Report 50-482/95-06)  
Subject: Docket No. 50-482: Reply to Notice of  
Violation 50-482/9506-01

Gentlemen:

Attached is Wolf Creek Nuclear Operating Corporation's (WCNOC's) reply to Notice of Violation 50-482/9506-01. This violation concerned two examples of WCNOC's failure to implement effective corrective actions for conditions adverse to quality.

WCNOC's response to this Notice of Violation is in the Attachment to this letter. If you should have any questions regarding this response, please contact me at (316) 364-8831, extension 4000, or Mr. William M. Lindsay at extension 8760.

Very truly yours,



Neil S. Carns

NSC/jad

Attachment

cc: L. J. Callan (NRC), w/a  
T. P. Gwynn (NRC), w/a  
D. F. Kirsh (NRC), w/a  
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Reply to Notice of Violation 50-482/9506-01

Violation 50-482/9506-01: Two examples of WCNO's failure to implement effective corrective actions for known conditions adverse to quality

"Criterion XVI of 10 CFR 50, Appendix B, "Corrective Action," requires, in part, that measures shall be established to assure that conditions adverse to quality, such as failures, deficiencies, and deviations, are promptly identified and corrected.

- Contrary to the above, from January 25 to February 23, 1995, the licensee failed to take prompt and adequate corrective action for a condition adverse to quality. Specifically, on January 25, 1995, the licensee reviewed a consultant's report which identified 11 safety-related motor-operated valves which were degraded. The licensee failed to write a performance improvement request to promptly identify and correct the degraded valves.
- Contrary to the above, from February 9, 1988, to March 8, 1995, the licensee failed to take prompt and adequate corrective action for a condition adverse to quality. Specifically, on February 9, 1988, Reactor Trip Breaker Hand Switch SBHS-1 failed to function as designed. The licensee identified that the switch contacts would open and deenergize the "A" reactor trip breaker undervoltage relay when the switch was operated in the closed direction. The licensee failed to take corrective action to resolve the plant problem. As a result, a repeat of the 1988 failure caused an unplanned reactor trip on March 8, 1995."

Admission of Violation:

Wolf Creek Nuclear Operating Corporation (WCNO) acknowledges and agrees that a violation of Criterion XVI of 10 CFR 50, Appendix B, "Corrective Action," occurred when WCNO failed to document its implementation of corrective actions to correct and prevent recurrence of the above discussed conditions adverse to quality.

Reason for Violation:

Root Cause and Contributing Factors:

Based on an evaluation of the above noted issue it has been determined that WCNO's failure to implement effective corrective actions has several root causes. The root causes are:

The lack of sufficient personnel awareness and understanding of what constitutes a degraded/nonconforming condition.

The lack of adequate procedures to address the guidance provided in Generic Letter 91-18, dated November 7, 1991, "Information To Licensee Regarding Two

NRC Inspector Annual Sections On Resolution Of Degraded And Non-Conforming Conditions And Operability."

The lack of effective management and supervisory oversight and guidance.

**The primary root cause of the first example has been determined to be:**

Insufficient personnel awareness on the part of engineering resulted in the incorrect interpretation of the classification of "possibly susceptible," and the subsequent failure to take the conservative approach in the performance and documentation of a formal operability evaluation and proceed with this issue through the formal WCNOG corrective action program (Performance Improvement Request [PIR]).

**Additional Information:**

Engineering gathered all of the appropriate organizations to review the results and finalize resolution for each area impacted by the consultant's report. This meeting occurred on January 25, 1995, following receipt of final report from the consultant on January 17, 1995. Within this period of time, the report was also reviewed in detail as a verification of the consultant's efforts. The formal WCNOG corrective action program was not entered because this issue was not perceived to create a nonconforming or indeterminate condition. Long term action plans to resolve the concern were developed during the January 25, 1995 meeting. However, because the procedures addressing nonconformances were not entered, the necessary operability evaluations were not formally performed and documented.

It was not until the Vice President Engineering discussed this issue with the Nuclear Regulatory Commission (NRC) that one of the contributing factors to the root cause was identified. The NRC felt that this phenomena was representative of a nonconforming or degraded condition as depicted in Generic Letter 91-18. After review of this document, it was determined that the standard ANSI definition of nonconformance/nonconforming used in WCNOG's procedures did not reflect the guidance of this generic letter. Corrective actions have since been taken to update the WCNOG procedural definitions to conform with Generic Letter 91-18.

**The primary root cause of the second example has been determined to be:**

The root cause of the reactor trip was determined to be Wolf Creek Nuclear Operating Corporation's (WCNOG) failure to implement all needed corrective actions. In 1988 WCNOG identified that Switch SB HS0001 was not functioning properly. At that time WCNOG revised Surveillance Test Procedures STS IC-211A, "Actuation Logic Test Train A SSPS" and STS IC-211B, "Actuation Logic Test Train B SSPS," requiring that the breaker manipulations associated with this testing be performed locally, instead of using Switch SB HS0001. However, WCNOG failed to revise procedures STS IC-746A/B "Reactor Protection System Reactor Trip Breaker "A/B" Time Response Testing," to delete the use of Switch SB HS0001 and require local closure of the breakers. STS IC-746A/B were only performed during outages in 1988. They were later revised to be performed at power. As additional knowledge and experience with the operation of the switch was gained, the priority for its replacement was reduced. This

lack of communication and questioning attitude was a problem in the 1988 time period at WCNOC. This is an area where WCNOC has made improvement, as noted during several recent NRC inspections.

The cause of the Reactor Trip Manual Actuation Switch (SB HS0001) failure was determined to be the slip contacts did not maintain continuity when the switch was moved from the "normal after close" position to the "closed" position. This intermittent continuity problem caused both the Main Reactor Trip Breaker "A" and Bypass Reactor Trip Breaker "B" to open simultaneously, resulting in a reactor trip.

Corrective Steps Taken and Results Achieved:

Actions implemented to correct the generic failure to implement effective corrective actions included:

- Implementation of several management changes within the Engineering Department. These changes brought personnel who better understand and support the WCNOC corrective action program to key positions within Engineering.
- The new Engineering Management personnel have held informal meetings to clearly express their expectations for engineering personnel support and use of the WCNOC corrective action program.
- The WCNOC industry information review program has been revised to require the initiation of a PIR for all incoming industry issues that previously were only documented via the industry information review program. This action will ensure that the operability concerns will be addressed expeditiously by the Plant Trending and Evaluation group and the corrective action evaluation program will be entered as mandated by plant procedures for all industry issues.
- The applicable WCNOC procedures have been evaluated and revised to accurately define nonconforming and degraded conditions in accordance with the guidance provided in Generic Letter 91-18. The revisions provided enhanced guidance and will help ensure more conservative actions for questionable conditions.

Specific corrective actions implemented to correct the first example included:

- Calculations were performed during the inspection that provided a justification for continued operability. Long term resolution evaluations and enhancements will be documented and implemented in accordance with WCNOC's industry information review and corrective action programs.
- Procedures AP 28-001, "Evaluation of Nonconforming Conditions of Installed Plant Equipment," AP 28A-001, "Performance Improvement Request," and ADM 02-024, "Technical Specification Operability," were evaluated and revised to accurately define nonconforming, indeterminate, and degraded conditions in accordance with the guidance provided in Generic Letter 91-18. The

revisions provided enhanced guidance and will help ensure more conservative actions for questionable conditions.

- The WCNOG industry information review program was revised on March 3, 1994, to require the initiation of a PIR for all incoming industry issues that previously were only documented by the industry information review program. This action will ensure that the operability concerns will be addressed expeditiously by the Plant Trending and Evaluation group and the corrective action evaluation program will be entered as mandated by plant procedures for all industry issues.
- Individual PIRs have been generated to track the long term corrective actions for Valves BBPV8702A/B, EJHV8701A/B, EJHV8840, EMHV8802A/B, EJHV8811A/B, and ENHV0001/7. The necessary procedural changes resulting from the PIRs were completed on May 1, 1995. Interim operability prior to completion of these corrective actions can be described by the following:

Valves BBPV8702A/B and EJHV8701A/B were identified as potentially susceptible to thermal binding in the consultant's report, and Valves EJHV8840 and EMHV8802A/B were also identified as potentially susceptible to pressure locking. The consequences of thermal binding of Valves BBPV8702A/B and EJHV8701A/B has no significant impact on nuclear safety. These valves are not required to bring the plant to a safe shutdown condition. It is highly unlikely that Valves EJHV8840 and EMHV8802A/B would become pressure locked post-loss of coolant accident (LOCA) based on the history of hot leg RCS check valve sealing, and industry operating experience. The consequences of not achieving hot leg recirculation when desired does not impact core cooling capability, since cold leg recirculation remains unaffected. Operational procedures currently address generic actions necessary in the case that hot leg recirculation valves do not open.

Procedure reviews in regard to pressure locking of EJHV8840 and EMHV8802A/B have been completed. Long term actions are to reclassify the hot leg recirculation function as a maintenance function, not essential for sustaining coolant flow.

The four valves isolating the containment sump from the residual heat removal system and the containment spray suction (EJHV8811A/B and ENHV0001/7) are possibly susceptible to pressure locking. For short term assurance the containment sumps have been filled with borated water. Engineering has demonstrated that this action, along with evidence that the valves have sufficient opening capability, will prevent potential pressure locking of these valves. WCNOG will evaluate the feasibility of modifying the valves during the eighth refueling outage as part of a long term resolution plan. Industry resolution of the concern for potentially susceptible valves will be monitored by WCNOG for the most effective modification or resolution.



Specific corrective actions implemented to correct the second example included:

- In addition to the generic corrective actions discussed above WCNOG personnel, as a whole, have a better understanding of the corrective action program, management's expectations relative to the use of the corrective action program, and an improved support for and use of the formal corrective action program.
- Procedures STS IC-746A, STS IC-746B, STS IC-215, "Trip Actuation Device Operational Test Of Manual Reactor Trip, Trip And Bypass Breaker UV/Shunt Trip, Turbine Trip On Reactor Trip and P4," and SYS SF-120, "Rod Control System Operation," have been revised. These revisions require breaker manipulations to be performed locally, rather than using Switch SB HS0001. With these revisions all procedures that manipulate the Switch SB HS0001 to the "closed" position have been reviewed and revised.
- An Operator Aid (a placard) was placed at the Reactor Trip Manual Actuation Switch (SB HS0001). This Operator Aid states - "WITH ANY RODS WITHDRAWN DO NOT OPERATE SB HS0001 TO THE CLOSED POSITION."

Corrective Steps That Will Be Taken to Avoid Further Violations:

Corrective actions planned to correct the generic failure to implement effective corrective actions included:

- Establish written management expectations and measures of excellence for Engineering personnel. These enhancements will ensure Engineering personnel understanding of personal accountability for accuracy, communication and vision of how to make engineering a world class performer. This action will be completed by July 7, 1995.
- Management will informally discuss the written expectations and measures of excellence with all engineering personnel. This action will be completed by July 28, 1995.
- Training will be provided on the WCNOG corrective action program for all of Engineering. This training activity will be incorporated into the ongoing training program for engineering personnel by August 31, 1995.

Specific corrective actions planned to correct the first example included:

- WCNOG will evaluate the feasibility of modifying the valves during the eighth refueling outage as part of a long term resolution plan.
- Industry resolution of the concern for potentially susceptible valves will be monitored by WCNOG for the most effective modification or resolution.

Specific corrective actions planned to correct the second example included:

- WCNOC will replace the switch during the eighth refueling outage, in the spring of 1996.

Date When Full Compliance Will Be Achieved:

Full compliance with Criterion XVI of 10 CFR 50, Appendix B has been achieved. All corrective actions associated with the specific examples and their generic implications will be completed shortly after the eighth refueling outage, in the spring of 1996.