



UNITED STATES
NUCLEAR REGULATORY COMMISSION

REGION IV
611 RYAN PLAZA DRIVE, SUITE 400
ARLINGTON, TEXAS 76011-8064

DEC 7 1992

Docket No. STN 50-482
License No. NPF-42
EA 92-191

Wolf Creek Nuclear Operating Corporation
ATTN: Bart D. Withers
President and Chief Executive Officer
Post Office Box 411
Burlington, Kansas 66839

Gentlemen:

SUBJECT: NOTICE OF VIOLATION AND PROPOSED IMPOSITION OF CIVIL
PENALTY - \$50,000
(NRC INSPECTION REPORT NC. 50-482/92-30)

This is in reference to the inspection conducted September 21 through October 6, 1992, at the Wolf Creek Generating Station. This inspection, which was documented in a report issued on October 27, 1992, focused on the circumstances surrounding Wolf Creek Nuclear Operating Corporation's (WCNOC) discovery on August 27, 1992, of a mispositioned locked, throttle valve in the essential service water system. Based on potentially significant apparent violations of NRC requirements, an enforcement conference was conducted between representatives of WCNOC and the NRC in NRC's Arlington, Texas, offices on November 3, 1992.

On August 17, 1992, during the conduct of a procedure to measure non-safety related service water flow through component cooling water (CCW) heat exchanger 'A', plant personnel determined the flow rate through this heat exchanger was approximately 836 gallons per minute (gpm) less than the expected value of 7,200 gpm. Since safety-related essential service water (ESW) utilizes the same components and flows through the same heat exchanger, plant personnel developed a procedure to verify that design-basis ESW flow rates could be achieved. On August 27, 1992, plant personnel implemented this procedure and measured ESW flow through CCW heat exchanger 'A' at 7,213 gpm, approximately 842 gpm less than the expected value of 8,055 gpm and approximately 80 gpm less than the minimum design basis flow rate specified in the facility Updated Safety Analysis Report (USAR).

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As part of its investigation of the cause of this low flow condition, plant personnel closed valve EF V058, a manually operated valve that is normally locked open in a predetermined position to ensure adequate ESW flow under certain accident conditions. When the valve was closed, a loud noise emanated from the valve actuator and the valve could not be reopened. At the same time, it was also noted that with the valve closed the valve position indicator indicated that the valve was partially open. Based on the inability to attain sufficient ESW flow (the ESW provides cooling water to many safety-related plant components under accident conditions), WCNOG declared train 'A' of the ECCS and CCW systems inoperable and made a prompt report to NRC's Operations Center in accordance with 10 CFR 50.72.

Further investigation of this event determined that on July 22, 1992, during preventive maintenance on valve EF V058, which was intended to involve only the lubrication of the valve operator, a plant mechanic made an adjustment to the valve position indicator. This task was beyond the scope of the Work Request (WR) 51543-92 written for the job. This adjustment, which was not documented on the work request or discussed with plant operations personnel following this maintenance activity, resulted in valve EF V058 being left in the wrong position at the conclusion of this maintenance activity. As a result, post-maintenance testing was not conducted to ensure that valve EF V058 was in the correct position. Therefore, from July 22, 1992, until this condition was discovered and corrected on August 27, 1992, ESW flow through CCW heat exchanger 'A' would have been below the minimum USAR values if this system were called upon to function following a loss of coolant accident.

The NRC recognizes that WCNOG took immediate action to repair valve EF V058 and restore it to its required position, thus restoring ESW to full operability. In addition, as discussed at the enforcement conference, WCNOG took additional actions to ensure that similar valves were not affected, developed plans to review pending preventive maintenance instructions for similar weaknesses to those identified in WR 51543-92, and has an ongoing review of work process controls.

Based on the results of NRC's inspection and the discussions that took place during the enforcement conference, the NRC believes that a violation of requirements related to work requests and work instructions directly contributed to this event. Wolf Creek Generating Station (WCGS) Technical Specifications and related procedures governing these activities require that maintenance which can affect the performance of safety-related equipment be preplanned and performed in accordance with written procedures and documented instructions appropriate to the circumstances.

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Contrary to WCGS procedures, work beyond the scope of the work request was performed and not documented and, as a direct result, post maintenance testing was not conducted to ensure that valve was locked and left in its pre-determined locked position.

The NRC is concerned about the apparent lack of sensitivity to the importance of the positioning of this valve reflected by the circumstances surrounding this event. However, the NRC also recognizes that WCNOC determined subsequent to this event that the work instructions that were used, while not inadequate, could have been of better clarity. Nevertheless, based on several recent violations similar in nature to this case, the NRC has continuing concerns about WCNOC's control of work activities that can affect safety-related equipment. The clarity and accuracy of procedures as well as compliance with them make up part of this concern. For example, on August 10, 1992, a Notice of Violation was issued because specific procedural steps were not performed, resulting in the dilution of the spray additive tank sodium hydroxide concentration. On June 30, 1992, a Notice of Violation was issued for two violations. One occurred because an undocumented minor maintenance was performed on a valve in a safety-related system without a work request and the other one occurred because a procedure that was inadequate resulted in an inadvertent release of radioactive gas to the radwaste building. The latter event occurred despite a previous occurrence of a similar nature. On April 9, 1992, a Notice of Violation was issued for three instances in which procedures were inadequate.

These failures appear to reflect a continuation of a problem noted by NRC in the WCGS Systematic Assessment of Licensee Performance report issued in December 1991. In assessing WCGS's performance in the functional area of maintenance and surveillance, the report stated that work process controls were generally good, but that several incidents could have rendered safety-related equipment inoperable. The report stated, "In these specific work activities the planning efforts did not result in a close attention to the ramifications of the specific activity." WCNOC stated at the November 3, 1992, enforcement conference that it viewed the ESW problem as a significant issue, but isolated. The NRC is unable to reach the same conclusion. While the NRC believes that WCNOC's corrective actions in this case were appropriate, the relatively limited scope of actions that have been completed provide an inadequate basis for such a conclusion. Only after pending preventive maintenance instructions are reviewed, the ongoing review of work process controls is completed, and the findings of those efforts are compared with the types of violations discussed above, will there be enough information to reach a meaningful conclusion.

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The violation of work controls that is the basis for this action resulted in degraded essential service water flow. As discussed during the enforcement conference, WCNOC relied upon existing analyses to conclude that the ESW flow would have been adequate, despite this degradation, to provide sufficient cooling to plant components under all accident conditions. Although this conclusion mitigates the technical safety significance of the violations that occurred, it does not reduce the regulatory significance that NRC attaches to violations of this type. As discussed above, work was performed on a safety-related component apparently without the recognition that the work could defeat the functioning of an important safety system. Additionally, the mispositioning of this valve, which resulted in a significant reduction of the margin of safety assured by system flow rates higher than necessary to meet design assumptions, could easily have resulted in more significant degradation of ESW flow because the mechanics involved did not recognize that they had affected flow by adjusting the valve position indicator incorrectly. Therefore, in accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," (Enforcement Policy) 10 CFR Part 2, Appendix C, the violation is classified at Severity Level III.

To emphasize the importance of improving controls over maintenance on safety-related components and aggressively pursuing corrective actions designed to achieve such improvements, I have been authorized, after consultation with the Director, Office of Enforcement, and the Deputy Executive Director for Nuclear Reactor Regulation, Regional Operations and Research, to issue the enclosed Notice of Violation and Proposed Imposition of Civil Penalty (Notice) in the amount of \$50,000 for the Severity Level III violation described above and in the enclosed Notice.

The base value of a civil penalty for a Severity Level III violation is \$50,000. The civil penalty adjustment factors in Section VI.B.2 of the Enforcement Policy were considered, but resulted in no net adjustment being made. WCNOC's identification of the reduced flow condition in the ESW system, which warranted a reduction in the penalty by 50 percent of the base value under the "Identification" factor, was offset by NRC's view that this event is indicative of a recurring and uncorrected weakness in work control processes, which warranted an increase in the penalty by 50 percent of the base value under the "Licensee performance" factor. The remaining factors were considered but did not result in any adjustments.

Other violations that were identified in the inspection report were not considered in assessing the civil penalty because none

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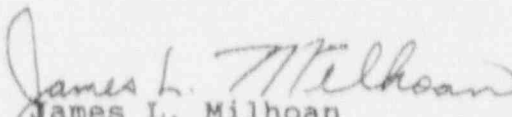
of them directly contributed to degrading ESW flow. One apparent violation discussed in the inspection report, involving a December 1991 incident in which valve EF V058 was found mispositioned, is not being cited because it occurred when the ESW system was not required to be operable and when locked valve requirements were not required to be in effect. The remaining apparent violations identified in the report appear in Section II of the enclosed Notice. With respect to Violation II.A.3, NRC is concerned that the system engineer appeared to search for plausible "paperwork" problems rather than believe the indications of reduced system flow that were apparent on August 17, 1992. Your response to the enclosed Notice should specifically address those actions you have taken or planned to address this concern.

WCNOC is required to respond to this letter and should follow the instructions specified in the enclosed Notice when preparing your response. In your response, you should document the specific actions taken and any additional actions you plan to prevent recurrence. After reviewing your response to this Notice, including your corrective actions, and the results of future inspections, the NRC will determine whether further NRC enforcement action is necessary to ensure compliance with NRC regulatory requirements.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be placed in the NRC Public Document Room.

The responses directed by this letter and the enclosed Notice are not subject to the clearance procedures of the Office of Management and Budget as required by the Paperwork Reduction Act of 1980, Pub. L. No. 96-511.

Sincerely,


James L. Milhoan
Regional Administrator

Enclosure:

Notice of Violation and Proposed Imposition
of Civil Penalty

cc w/enclosure: (see next page)

Wolf Creek Nuclear
Operating Corporation

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cc w/enclosure:
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