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Office of Public Affairs, Region IV
611 Ryan Plaza Drive - Suite 400
Arlington, Texas 76011-8064

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CONTACT: Breck Henderson July 2, 1996
OFFICE: 817/860-8128
PAGER: (800) 443-7243 (065477)

NRC PROPOSES TO FINE WOLF CREEK \$300,000
FOR VIOLATIONS DURING JANUARY ICING EVENT

The Nuclear Regulatory Commission staff has informed Wolf Creek Nuclear Operating Corp. that it proposes to fine the company \$300,000 for apparent violations of NRC requirements that occurred when ice clogged the nuclear plant's cooling water intakes January 30-31.

An augmented inspection team, which was on site February 6-15, examined the circumstances of the event, and a special inspection was conducted March 18-25. The special inspection team identified 10 apparent violations.

The icing that occurred at Wolf Creek is known as "frazil ice." This is an unusual phenomenon in which ice forms below the surface of a body of water during extremely cold weather. Frazil ice can be sucked into the cooling water intakes of industrial plants such as nuclear power plants where it blocks flow by adhering to screens designed to prevent trash from entering the intakes.

On January 30 ice blocked the main cooling water intakes at Wolf Creek, forcing a shutdown of the plant. Frazil ice then clogged the essential service water intakes preventing operation of one train of this system, which was required to cool plant safety systems during cooldown after the reactor was shut down, and threatened the second and only remaining train.

Based on information from the special inspection and a predecisional enforcement conference May 10 between Wolf Creek officials and NRC staff, the NRC has determined that violations of regulatory requirements occurred. The NRC rates violations on a four-level scale, with Severity Level I as the most severe. The Wolf Creek violations are characterized as Severity Level III and fall into three areas of concern, each of which carries a proposed \$100,000 fine:

1) The essential service water system, which serves as the final source of cooling water for the plant, is designed so that warm water recirculates to the system intakes to prevent ice buildup. However, this warming flow, as designed, was insufficient to prevent icing. NRC inspectors determined that Wolf Creek managers missed at least four opportunities over several years to identify and correct this design deficiency.

2) During the plant shutdown made necessary by icing at the main circulation water intakes, Wolf Creek operators did not follow plant procedures when aligning the essential service water system for operation. An incorrect valve lineup resulted, which complicated the event by preventing full warming flow from reaching the system intakes. This incorrect valve lineup was not corrected for about six hours despite the concern of the operator who aligned the system.

3) During the plant cooldown the turbine-driven auxiliary feedwater pump started as designed, but leaked non-radioactive feedwater from the pump packing. The turbine-driven auxiliary feedwater pump is a safety-related pump that may be required to supply cooling water to remove decay heat from the reactor. In this event the pump was not needed and was shut down to stop the leaking. The packing was found to have been incorrectly installed when changed during recent maintenance. It was determined that the problem was caused by a failure to follow all applicable work instructions during the packing replacement. Wolf Creek operators also failed to correct pump packing installation problems on the same pump during earlier maintenance on that system.

In a letter to Wolf Creek chief executive Neil S. Carns, NRC Regional Administrator L. Joe Callan said, ". . . each of these violations reflect significant weaknesses in engineering, operations, and maintenance that contributed to the frazil ice event and complicated the recovery from that risk-significant event that was entirely preventable."

The fines of \$100,000 for Severity Level III violations represent a doubling of the base civil penalty of \$50,000. According to Mr. Callan, this action was taken "to emphasize the significance of the problems these violations represent, to encourage improvement in performance, and to emphasize the need for lasting, comprehensive corrective actions."

Wolf Creek has 30 days to respond to the NRC's Notice of Violation. During this time it may pay the civil penalty or protest it. If the protest is denied, the company may ask for a hearing.

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